# Address
AT THE
# OPENING OF THE ANATOMICAL DEPARTMENT
IN THE
## NEW BUILDINGS OF THE UNIVERSITY OF EDINBURGH.

*Delivered October 27th,*

By WILLIAM TURNER, M.B., F.R.S.,
PROFESSOR OF ANATOMY.

*(Concluded from p. 726.)*

AND now, gentlemen, we may perhaps devote a few minutes to the consideration of the question of why it is that the study of anatomy has for centuries, by common consent, been made the foundation of medical education. Anatomy forms the basis of the biological sciences; just as a knowledge of the laws of motion is essential and must be constantly recurred to at every step, before any true progress can be made in the investigation of the physical sciences, so must the structure of the human and animal frame be appealed to in all attempts at classification, in all inquiries into the adaptation of parts to their uses, in all discussions respecting the functions they perform in a state of health, and the alterations or disturbance in those functions which take place in the course of disease.

As a branch of medical training anatomy may be looked at from two points of view, either in its direct relations to the science and practice of medicine and surgery; or as a valuable educational exercise for disciplining the mind to habits of observation, accuracy and patience, and for strengthening the memory and reasoning powers.

In its direct relations to the science of medicine it is of importance as the science which treats of the structure, position, form, and relations of the constituent parts of the body, and of the construction of the body as a whole; so that in applying yourselves to this subject you are, in short, studying the mode in which the complex mechanism of the human framework is put together. If you are to understand by the term morphology the study of form, internal and external, superficial and deep, then the term anatomy embraces not only morphology but something more. For superadded to the conception of form, position, and relations you have that also of structure and construction. Hence by its study you are enabled to realise the nature of that mechanism which, though you examine it in its dead or passive condition, has yet at one time teemed with life and activity. The study of anatomy is therefore a necessary preliminary to that of physiology, which treats of the functions performed by the organs and tissues of the body when in a state of health; and to that of pathology, which treats not only of disturbed function, but of altered structure. Hence, by the common consent of the schools, anatomy is regarded as a fundamental subject, and forms a part of the early training of every student of medicine.

But anatomy has also a direct relation to the practice of medicine and surgery; it is by its study that you become acquainted with the position and relations of all those tissues, organs, and parts, the diseases or modifications in the structure or functions of which, you as prospective practitioners of medicine, have to make yourselves acquainted with. By the careful dissection and manipulation of parts your hand becomes trained to recognise differences in form and structure, and fitted to execute such operative procedures as may be required in the exigences of practice. It is only after you have acquired an accurate conception of normal anatomy and physiology that you can hope to apply your knowledge to the diagnosis of disease, so as to feel certain of the ground on which you stand. Now, as the relations of anatomy and physiology to the practice of medicine and surgery can only be properly realised by the student after he has seen something of that practice, after he has, in short, attended for some time the wards of an infirmary and come face to face with disease, the study of these two fundamental sciences should not cease in the early years of a medical curriculum, but ought to overlap, for a time at least, with the hospital work. Hence I am unable to agree with those educationists who would draw a sharp line of demarcation between the study of anatomy and physiology and the final subjects of medical study. The attention of the student ought not, in my judgment, to be withdrawn from the one until he has been introduced to the other by attendance in the wards of a hospital.

I have now told you, gentlemen, what I conceive to be the relations of anatomy to medical science and practice. There are some, however, who fail to recognise this comprehensive aspect of the subject, and who seem to limit it to the study merely of the form, position, and relations of parts, without any reference whatever to their structure and mechanical arrangements; as if the topographical relations of parts and organs embraced the whole science of the subject. But such a limited conception of what is meant by the term anatomy, and what ought to be included in its teaching, is most unphilosophical. It has not been the creed of this University or of the other Universities in Scotland. Here, where the tradition of the character of the teaching of the second Monro still lingers in the schools; here, where John Goodsir, within the recollection of so many of us, propounded the science in its manifold relations,—it would be an act of treason to the memory of these great men, and to the whole history and development of our school, for one moment to entertain it.

Such an erroneous conception, indeed, of the science could never have arisen in a university system of teaching. For by the introduction of the medical sciences into a university curriculum their teaching acquires a breadth and comprehensiveness such as is scarcely attainable in a purely technical school. Their teachers have to regard them not merely with reference to the requirements of a particular profession, but also in their more general bearings. The educational horizon is not, and ought not to be, bounded by the standard of examination exacted either by the University herself, or by other examining boards, but should ever be pushed onwards with the advancing wave of knowledge.

On the other hand, in the purely medical schools, the education has undoubtedly a tendency to become confined within particular limits. There have been, and without doubt will always continue to be, men attached to these institutions actuated by a noble desire to advance the science of medicine, and to inspire similar feelings into the minds of their pupils; and to those who first guided my steps along the thorny paths of professional study I cannot too strongly express my indebtedness. But many of the teachers have as their object not so much to contribute by their own efforts to the progress of medical science, but simply to prepare their pupils for the examination ordeal to which they will have to be subjected. There is thus engendered in the mind both of teacher and pupil the feeling that the examination is the main end or object of education; that the education should be subservient to the examination, and not the means of strengthening the student's mental powers and filling him with knowledge.

Let me give you an illustration of this. A much-valued friend of mine, now occupying one of the most honourable positions open to a member of our profession, told me, not many weeks ago, that when during his studentship he was applying himself one day most industriously to the dissection of the muscles of the back, the demonstrator in charge of the dissecting-room came to him and said, "Why are you wasting your time in dissecting those muscles? They do not examine on them at the Hall." Notwithstanding this remonstrance my friend persevered with his work. He had a higher conception of his educational needs than had his teacher, or he never would have attained his present dignified position.

Such a mode of looking at structure would, I will venture to say, never have presented itself to a teacher in a university. Take these muscles of the back, for example. No one who ever attended the lectures of my distinguished predecessor in this chair can forget the care with which he explained their attachments and arrangement, and showed how they acted in producing the beautiful yet complicated movements of the spinal column. There is, indeed, no part of the human mechanism which presents more features of interest in connexion with the movements of the body than the joints and muscles of the spine. And note what has been the practical result of their careful study. An eminent American surgeon, Dr. Sayre, has founded on it a method

of treatment of curvatures of the spine based on rational and not on empirical principles.

One sometimes reads in introductory and other addresses that anatomy, descriptive and topographical, is a perfect and complete science, and limited in its scope; that all that is or can ever be known about it is recorded in books; that its study, whilst admirable as an exercise for the memory, and as a training for habits of accuracy, exactness, and patient careful observation, is yet of little or no value in forming the mind to reason out the complex facts of biological science, or to strengthen the critical faculty. Such statements are full of fallacy; they show an entire want of appreciation of the real scope of anatomical science, and of its many-sided aspects, and a want of knowledge of the progress which it has made and is still making. I could give you many illustrations of the erroneous nature of such remarks to prove to you that anatomy is an advancing science, and that it exercises, and will for all time continue to exercise, an important influence on the progress of physiology and pathology, and on the practice of both medicine and surgery; but I shall refer to a few only of the advances which have been made since I became a teacher of anatomy twenty-six years ago. And in selecting these, observe that I do not include one of the innumerable additions to our knowledge of structure, both macroscopic and microscopic, but confine myself to the form, position, and relations of parts and organs.

During my studentship the topography of the cerebral convolutions and lobes was very imperfectly known, and the description of their arrangement was meagre and wanting in precision. The publication, however, in 1854 of the important memoir of Gratiolet at once threw a flood of light on the arrangement. Anatomists in this and other countries followed up the subject with much zeal, with the result of placing our knowledge of the surface anatomy of the brain on a definite basis as regards the relations of the convolutions to each other and to the surface of the head.

And note how this series of anatomical researches has borne fruit in advancing our knowledge of the physiology and pathology of the brain. If these preliminary but essential anatomical inquiries had not been conducted we should never have heard of the remarkable experimental investigations of Fritsch, Hitzig, and Ferrier into the functions of the cerebrum. Neither would it have been possible to have localised with precision the seats of morbid processes in the hemispheres, such as enabled Broca to associate right hemiplegia and aphasia with disease of the inferior frontal convolution in the left hemisphere.

The dissections of Dr. Stilling the younger, conducted during the last few months, have proved that the roots of origin of the optic nerves have much more extensive relations than has hitherto been supposed. By tracing a band of these fibres through the pons and medulla to the decussation of the pyramids, he has forced on the attention of physiologists the necessity of reconsidering the functions both of the medulla and the lateral columns of the spinal cord. With every discovery in anatomy, fresh problems are presented to the consideration of the physiologist.

Again, if you compare the descriptions of the cranium written not many years ago with those which have recently been given, you will now find an enormous advance in precision and fulness of statement.

The invention by Cleland, Broca, and other craniologists of new instruments for measuring and delineating the skull and head have enabled anatomists to conduct a series of researches from which we have obtained a much clearer insight into the construction of the skull in individuals, and into the modifications in its shape and in the proportion of its different parts in the different races of men. Questions of the widest interest in their anthropological bearings have in this manner been elucidated.

The careful study of the arrangement and direction of the cranial sutures by Virchow and others has given us a key to the interpretation of the modications which may be produced in the form of the skull by their premature closure, on the one hand, and by retarded ossification, on the other. So that it would be utterly inexcusable nowadays for an anatomist to commit such an error as was made by a professor of the standing and reputation of Huschke of Jena, just twenty-six years ago, when he figured a cranium deformed through premature closure of the sagittal suture as a normal and typical specimen of the Celtic skull.

In the anatomy of the movable joints, also, great advances have been made, more especially in the acquisition of a more precise acquaintance with the forms of the articular surfaces. It is a mistake to suppose that the character and direction of the movements of a limb are determined solely by the relative positions of the bones, muscles, and tendons. Undoubtedly these structures play an important part, but they are not the only factors to be considered. The direction and character of the movements of a wheel are influenced by the form of its rim and by the configuration of the surface on which it moves, as well as by the propulsive power applied. And so it is with the joints. The importance of studying the forms of the articular surfaces was indeed insisted on by the brothers Weber in their classical treatise on the Mechanism of the Organs of Locomotion, published in 1836. But great advances have been made during the past twenty-five years in the elucidation of this difficult subject, more especially by the labours of Meyer, Langer, and Goodsir. Should anyone of you wish to investigate a complex biological problem, and to bring into play your analytical and critical powers, you will find full exercise for them in the study of the forms of the articular surfaces of the knee-joint, and in the influence which those forms exert on the character of its movements.

The introduction by the Russian surgeon, Pirogoff, of the method of freezing the human body and then making sections through its different parts—a method which Braune of Leipzig has pursued with so much zeal—has enabled anatomists to obtain much more correct views of the relations of the organs to each other, and to the walls of the regions in which they are situated, than could be done by the ordinary methods of dissection. We have, in consequence, a much more precise knowledge of the real position of the spleen, stomach, heart, uterus, bladder, and other viscera now than was the case ten years ago. Physicians will profit by these additions to anatomical knowledge, and greater definition will be given to their diagnoses. There is indeed no department of practical medicine which has been more a gainer by the introduction of the freezing method than that of obstetrics.

Are we, then, to say that with this year of grace 1880 all further progress in topographical anatomy will cease, that we have reached the limits of our subject, and that henceforth the anatomist must content himself with repeating the observations made by his predecessors, with no hope of himself adding to the progress of knowledge? Such a position would be intolerable if it were true. No man with any intellectual vigour or capacity for thinking and reasoning could be brought to pursue a subject so barren. Anatomy would cease to be a science, and become a mere handicraft. Anatomical teaching would fall into the hands either of the veriest dullards, whose sole object in life would be to earn their daily bread by grinding their pupils up to the level of an examination; or would be pursued for a time by young men desirous of using it as a stepping-stone to practice. The further development of general biological and medical science, so far as they rest on an anatomical basis, would be stayed.

But, gentlemen, this picture of the finality of anatomy which has been painted by some writers is a mere fanciful hypothesis evolved out of the minds of those who are so absorbed in the contemplation of their own side of the shield of science, that they do not seem to recognise that it has more sides than one.

In literature and in art no generation treads precisely in the footsteps of its predecessors. The ever-changing social conditions amidst which men live, the development of fresh habits and of ways of looking at objects and actions, the lessons taught by augmented experience, are constantly modifying the character of the environment, and producing variations in our modes of thinking and working.

It is the same, if not even to a greater degree, in science, for each new discovery affords a wider platform from which the world of nature may be surveyed, gives a keener and fuller insight into her complex phenomena, and enables us to obtain a clearer conception of their meaning. In this general advance anatomy participates along with the other medical sciences. Every year adds something to our knowledge of form and structure and of the relations which they bear to function, and a further light is thrown on the mechanism of the human frame.

But there is another fallacy as regards the relations of anatomy to medical education which sometimes finds expression. It has been said that anatomical details, which require from the student so much toil and labour and time to acquire, are but of little use to the busy practitioner, and,

indeed, are for the most part rapidly forgotten as soon as the examination ordeal has been passed. And it is implied that what is so soon forgotten can be of but little use, and the time and toil expended in acquiring things of which the memory retains no grip have been misapplied and wasted. Such a statement, plausible though it may at first sight appear, is really of no moment as an argument against the minute study of the details of anatomy. Let us test its value by a reference to other subjects of study, both general and professional.

Of the shoals of wranglers that Cambridge has sent out during the last quarter of a century, how many, except those who may be following mathematics as a business, have preserved any accurate recollection of the scores of mathematical details which they had at their finger's end at the time of the examination? And yet are we to say that they derived no mental profit from their study? How many of the classmen that Oxford has trained during the same period, always excepting those who are scholars by profession, could now write Latin verses, explain the distinctive characters of the dialects of the Greek language, or even read a Greek play without the aid of a lexicon? and yet have not these men improved in taste, in the power of using their own language, and in literary expression, by the cultivation of the ancient classics?

But does topographical anatomy stand alone amongst the subjects of professional study in that the details are soon forgotten? How long do students retain in their memories the dimensions of epithelium and other cells, the breadth of nerve-fibres, and other finer details of histological study? Who amongst busy practitioners remembers the volume of the different gases, or the atomic weights of any but the most common of the elements? What use in practice is a minute knowledge of the chemical constitution of muscle, or of the experiments relating to the electric phenomena displayed by that important tissue? What is the need to the great bulk of practitioners of being able to discriminate between the characters of the different kinds of chinchona bark or of aloes?

And yet is it to be said that because all these minute details have no direct practical application, and are so soon forgotten, that it is useless ever to learn them, and that the time and labour they have occupied have been wasted? Is not a knowledge of these things, temporary though it may be, evidence of a power of continuous application and of mastering facts. Is it possible, indeed, to obtain a sound general conception of any science, or other subject of study, unless the details are gone into and understood? I could tell you of more than one instance in which men have gone utterly wrong in their enunciation of what they thought were general principles, simply because they had not taken the trouble to master the details. Depend upon it that, whether you learn or do not learn, in the minute details of the more important subjects of study lies the difference between slipshod information and that kind of knowledge the possession of which makes a man feel that he is treading on firm ground and not on the shifting sand.

He who will take time and trouble to follow out the ramifications of a nerve from its origin to its distribution in muscle, or skin, or internal viscus; or he who studies minutely the relations of an artery to the surrounding structures, or of an organ to the walls of the cavities in which it lies, and to the other organs contained in the same, or in an adjacent cavity, will, you may be sure, when he goes to the bedside, bestow an equal care in the examination of the patient whose disease he has to study and to treat. The qualities of mind which have led him to strive for precision of knowledge during his anatomical studies will have been strengthened by his earnest application, and the knowledge of form, position, relations, and structure, which he has thereby attained will find a practical application in his clinical work.

I am well aware that in surgery, for example, owing to the important discoveries of Professor Lister, the methods of practice are not so exclusively anatomical as was at one time the case. But though by his researches additional factors have been brought into use, a knowledge of anatomy is not the less necessary to the surgeon. Because we have new idols to worship, are we therefore to discard the old gods? Nay, is it not the more necessary to be perfect in our mastery of anatomical details? for by the development of the antiseptic system of practice, operations are now possible in regions where at one time no one would have thought of performing them.

If you sufficiently apply yourselves to the observation of the facts of normal relations and structure, the mind will become as it were saturated with these facts, you will be able to form a mental picture of the part or organ, and when the occasion arises to study that part or organ in a state of disease, you will be able vividly to realise the changes which have been produced in it.

Pursue your studies, gentlemen, with an earnest desire to cultivate accuracy and to acquire precision of knowledge. Let your motto be "Thorough." May the words of the preacher be for ever written on the tablets of your memory, "Whatsoever thy hand findeth to do, do it with thy might." And may God prosper the work.

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# THE TREATMENT OF ASTHMA BY THE INDUCED CURRENT.

BY I. BURNEY YEO, M.D., F.R.C.P.,
PHYSICIAN TO KING'S COLLEGE HOSPITAL, AND SENIOR ASSISTANT-PHYSICIAN TO THE BROMPTON HOSPITAL FOR DISEASES OF THE CHEST.

THE recent discussion on Asthma at the meeting of the British Medical Association at Cambridge gives especial interest to the following notes of a case which has lately been brought under my own observation. Two or three days after taking part in this discussion I found myself at the baths of Neuenahr, the guest of that able physician, Dr. Richard Schmitz; and I had an opportunity of seeing and examining with him an aggravated case of asthma, which had been treated by the application of the induced current, and apparently completely cured thereby.

This patient, a gentleman about forty years of age, had suffered from paroxysms of asthma for more than six years, originally induced, he believed, by a severe attack of catarrh. He had tried numerous remedies and visited various climates, but without any considerable relief. This year he was spending a second season at Neuenahr, but without any relief to his asthmatic attacks. Quite recently he was seized with an attack of unusual severity and duration, which had lasted, with but slight intermission, for three whole days and nights, when, as all other resources had failed, it occurred to Dr. Richard Schmitz to try the effect of the induced current applied in the manner suggested by Dr. Max Schaeffer of Bremen.[1] The relief afforded was immediate, and after twelve applications—i.e., an application twice a day for six days—the patient appeared quite well. I examined his chest carefully, and there was no trace of wheezing or of dry or moist râles of any kind. I examined his throat, and found evidence of chronic pharyngitis, the mucous membrane being very granular from the presence of many enlarged swollen follicles; but it was quite clean, and free from mucous secretion. The tonsils were scarcely at all enlarged, although they had been much so formerly. I mention these facts with respect to the condition of the throat, as they bear on the theory of the action of the remedy to which I shall immediately allude. The influence of the remedy had been so complete that the patient's gait and carriage were totally changed, and instead of assuming the bent, stooping figure of the asthmatic, he walked as upright as his fellows.

The galvanic current had been applied to the throat in the situation of the great nerve trunks, the vagus and sympathetic, each pole being applied just below the angle of the jaw and in front of the sterno-cleido mastoideus. The current, mild at first, was gradually increased in intensity until it could be distinctly appreciated by the patient as passing through the soft palate from one side of the throat to the other. It was continued for fifteen minutes at each sitting. It was noticed that the pupils, widely dilated at first, became strongly contracted as soon as the application of the current gave relief. Dr. Max Schaeffer, who has recently advocated this treatment, agrees in the main with Biermer as to the pathology of idiopathic asthma, meaning by *idiopathic* asthma those attacks in the intervals between which no evidence of morbid changes in the lungs can be found. He regards these attacks as a tonic spasm of the middle and

[1] Deutsche Medicinische Wochenschrift, 1879, No. 42.

finer bronchial tubes; but he looks upon the spasm as secondary, and agrees with Weber in believing the primary change to be a swelling or tumefaction of the bronchial mucous membrane, dependent on a fluxionary hyperæmia, itself due to a vaso-motor nervous influence, the principal *rôle* being played by the pulmonary fibres of the vagus. According to this view asthma is an irritative and reflex pulmonary neurosis. It agrees, in many respects, with the theory of asthma adopted by Dr. Andrew Clark in the discussion to which I have alluded, and which I hold myself as the most consistent with the clinical history and phenomena of the asthmatic paroxysms.

The morbid state, upon which the asthma depends, may—affect (1) the nerve itself, or (2) the coverings of the nerve, or (3) the tissues adjacent to the nerve.

Max Schaeffer lays great emphasis on the third of these conditions—viz., that morbid states of the structures adjacent to the nerve may influence and disturb the nervous currents. Tumours such as nasal polypi, hypertrophied tonsils, swollen cervical or bronchial glands (temporary hyperæmia of these glands), can, according to their position, cause irritative pressure on nerve filaments connected with the respiratory centres. He found that many of his asthmatic patients were the subjects of nasal catarrh, or pharyngeal catarrh, or laryngo-tracheal catarrh. He noticed that swellings of the mucous membranes of these parts were attended with asthmatic paroxysms, and patients would constantly refer the seat of their discomfort lower or higher in the throat, according to the seat of the swelling, and he concludes that all the symptoms of asthma are symptoms of irritation brought on by pressure on nerves which are in connexion with the pulmonary portion of the vagus, and especially in the upper part of the respiratory tract—the pharynx, larynx, and trachea.

He examines carefully the nose and throat, and applies the electrodes according to the seat of the disease. Usually the two electrodes are placed on each side of the neck about two centimetres below the angle of the jaw, and sometimes a little lower down in front of the sterno-cleido mastoideus. The current must be of good strength, so that the patient can feel the stream go across the larynx and soft palate. In bad cases it should be applied twice a day from fifteen to thirty minutes each sitting. He states that in the most severe cases it has acted "like witchcraft." He has never found the constant current do any good, but he has never failed with the induced current.

Certainly the result of the application of the induced current in the case that came under my own observation was very remarkable.

Hertford-street, Mayfair.

## THE ASPIRATOR AS AN AID TO DIAGNOSIS IN CASES OF OBSTRUCTION OF THE BOWEL;

### WITH DESCRIPTION OF AN ENTEROTOMY TUBE.[1]

BY RODERICK MACLAREN, M.D.,
SURGEON TO THE CUMBERLAND INFIRMARY.

I PURPOSE illustrating the use of the aspirator in cases of obstruction of the bowel by giving an account of the instance which drew my attention to its value; and as there are some other points in the case which are worthy of note, I will record its essential features.

Mrs. R——, aged forty-three, wife of a market gardener, was first seen by me on Tuesday, April 20th, 1880. She stated that she had not had her bowels moved since the previous Thursday, though she had taken aperient medicine, and that she had vomited frequently for two days. She was seven months gone in pregnancy. On the following day (April 21st) she miscarried, the child living only a short time. The treatment prescribed consisted in purgatives and frequently repeated enemata, some given with the long O'Beirne's tube. As this failed to give relief, she was next brought under the influence of opium, and subsequently belladonna was given. Each and all seemed to make her worse, and her condition was best when she was least interfered with. When she had been four days under treatment—this being eight days after the last motion—her state had become urgent; her pulse was very feeble, the vomiting frequent, and the abdomen distended and tense, so that the propriety of operative interference had to be considered. The probabilities were in favour of the obstruction being in the great bowel, for the following reasons: the symptoms were not very acute; the patient always passed plenty of urine; and she stated that for the previous six months she had difficulty with her bowels. This was not due to costive motion, for when she did succeed in getting them to act the consistence was natural. She had occasionally passed blood and mucus. Physical examination, however, gave no help; and it was a matter of extreme doubt in which part of the great bowel the obstruction occurred.

The abdomen on April 23rd was uniformly and intensely distended; it was everywhere resonant, a trifle less so in each loin, and I thought rather less tympanitic in the right than the left, but the difference between either of these regions and the rest of the abdomen was very slight. No hardness or tumour could be felt. No fæcal vomiting occurred. About a pint was the largest enema which could be given, and this usually returned unstained, but occasionally there was slight fæcal colouration. Nothing abnormal could be felt per anum. There was no appearance of cachexia; the patient was a stout florid woman.

It was at this stage that I found the aspirator of essential service. So uncertain were the indications of the seat of stricture that it was a question whether it would not be better to open the small bowel close to the cæcum rather than risk a colotomy, with the possibility of finding the bowel obstructed above the opening. It occurred to me, however, that by inserting an aspirator needle into the loin in the position of the colon I could ascertain whether this contained liquid fæces or not. The patient being placed under chloroform, with the kind assistance of my friend Dr. Murphy I aspirated the colon on the right side, preferring this to the left, because it was slightly less resonant on percussion. The aspirator withdrew air and liquid fæces, giving evidence that the closure of the bowel was below this point. I therefore performed right colotomy. The incision was a deep one, owing to the great amount of abdominal fat; and there was, from the same cause, some difficulty in finding the bowel,—the reverse of what is usually encountered. When the bowel was found, sutured to the skin, and opened, a large amount of flatus and fæces escaped. From the date of the operation the patient did thoroughly well. Five days after the colotomy some liquid fæces passed per anum. On the following day the same occurred, the motion containing much mucus. On the seventh day blood, mucus, and fæces were passed. From this period there was almost always a daily motion per anum, gradually increasing in consistence until she regularly passed a well-formed stool. At the same time liquid fæces escaped freely from the wound. On one occasion, a month after the operation, the bowel prolapsed through the wound. A recurrence of this prolapse was prevented by making her wear an enterotomy tube.

Six weeks after the operation the patient was out of bed. A week later the motions were so natural that I determined to see the effect of plugging the wound before deciding whether or not to let it heal. This was done by closing the tube. I arranged to see her again in a week, during which time she was to wear the plug if she felt no inconvenience from its use. On the morning of the day on which I had promised to see her she was found dead in bed by her daughter, who slept with her.

A post-mortem examination was made in the evening. The heart was found with a considerable covering of fat; the muscular fibre pale, and under the microscope mostly devoid of striation (her pulse had always been feeble and the heart sounds indistinct). Brain, lungs, liver, and kidneys were healthy. The large intestine was distended with air and contained a considerable quantity of solid fæces. The meso-colon was unusually free and large. A couple of inches above the sigmoid flexure was a cancerous mass, measuring an inch in thickness, two inches from above downwards, and occupying most of the circumference of the bowel. A great part of it was undergoing colloid degeneration, and there was some pus in the interior. The opening through the stricture into the lower bowel was a fairly free one. The post-mortem examination was a very instructive one. It was evident why medicinal treatment had failed: purgatives merely forced the contents of the bowel against a closed stricture; sedatives paralysed the bowel and allowed flatus, &c., to accumulate.

[1] Read before the Border Counties Branch of the British Medical Association.

From ulceration or the absence of pressure, or some such cause, the stricture, after the operation, became permeable, and during the last few weeks of her life allowed fæces to pass readily. The free attachment of the great bowel explained how it was that the dulness on percussion, which is usually present above a stricture, could not be detected, the intestine not being in close contact with the abdominal wall.

Obstructions of the bowel are so often obscure that any aid to the diagnosis of their position, or any expedient which will help us in treating them, deserves careful trial. In the aspirator we have an instrument which will determine whether any given portion of the ascending or descending colon contains liquid or not. If it does, it is of necessity above the seat of stricture. The puncture involves no risk. I once saw a post-mortem examination on a case in which the aspirator needle had been pushed into various portions of the bowel within six hours of death, and yet all traces of its use had disappeared. When the presence of liquid fæces in a portion of the colon is ascertained, we know that opening the bowel there will relieve the urgent condition. In the above case the needle was of great service as a guide to the bowel (there is not usually any difficulty in exposing it; but this patient was so fat that the wound was a very deep one, and the intestine was covered by a layer of fat). The class of case in which aspiration is most likely to be useful is: when no stricture or fæcal accumulation can be felt per anum; when there is no decided evidence by percussion dulness of a large accumulation in either ascending or descending colon and yet the symptoms point to stoppage of the great bowel, not the small one. I should certainly trust to it to guide me whether to perform colotomy or, on the other hand, to do abdominal section, with the object of removing the obstruction, or opening the lower end of the small bowel.

I have mentioned that I used an enterotomy tube for preventing a prolapse of the bowel. This is a contrivance which I had formerly found of much use in cases of colotomy; it prevents prolapse of the bowel, keeps the opening from closing, and can be made so as to a great extent to prevent contact of fæces with the wound and skin. It consists of a piece of large-sized drainage tubing fastened at right angles to a plate of perforated zinc. The tube is passed into the bowel, the zinc lies on the skin, and is kept there by a band of tape going round the body. The tape is fastened to the zinc plate by india-rubber rings, so as to keep it tense. If it is desired to protect the skin, the tube is passed into the wound through a sheet of gutta-percha tissue. It has a considerable general resemblance to a tracheotomy tube.

Carlisle.

## CASCA BARK *VERSUS* DIGITALIS.

BY DAVID DRUMMOND, M.A., M.D.,
PHYSICIAN TO THE INFIRMARY, NEWCASTLE-ON-TYNE.

IN the Gulstonian Lectures of 1877 Dr. Lauder Brunton pointed out the close resemblance which existed between the cortex erythrophlœi and digitalis in their physiological action. To use Dr. Brunton's words, the action of casca is to strengthen and slow the heart, to contract the arterioles, and increase the urine. For the past two years I have used the tinctura erythrophlœi (as it is proposed to style the drug) in a good many cases, a few of which I shall shortly cite with the view of comparing the therapeutical value of the two drugs, especially as regards the certainty and rapidity of their action. The tincture of casca I procured from Messrs. Brady and Martin, of Newcastle, who recommend the dose of five to ten minims, founded on Dr. Lauder Brunton's observations. I believe the strength of the tincture is 1 in 10.

Ellen H—— was one of the earliest of my cases in which the drug was tried. Into the details of her malady, or that of the cases to follow, it is unnecessary to enter. Aged eighteen, she had suffered from rheumatism, which left her with a constricted mitral orifice, as evidenced by presystolic murmur, thrill, &c. On the 26th of April, 1879, whilst the heart was beating at the rate of 90 per minute, five-minim doses of the tincture were ordered three times daily. The first evidence of its action occurred in the shape of an attack of epistaxis—i.e., increased arterial tension. On April 30th the pulse was 88. There being no return of the epistaxis, the dose was increased to eight minims. On May 1st the pulse was 80. On May 2nd ten minims of casca was given, which dose was continued up to the 21st, during which time the pulse remained at about 70. Then it was observed that the patient passed a great deal of urine. The effects of the drug were allowed to pass off, and on June 9th fifteen minims of tincture of digitalis were given thrice daily, the effect of which was to lower the pulse ten beats per minute in about a day. The patient was soon after discharged, the pulse remaining at from ten to fifteen beats below the average until she left.

Alice G——, aged twenty, suffering from mitral insufficiency. Her average pulse was about 100. On April 20th five-drop doses of the tincture were administered, which were gradually increased to fifteen minims three times daily; but owing to an attack of hæmoptysis on April 23rd the casca was stopped, at which time the pulse was at 90. On the 30th, the pulse still remaining about 90 to 95, eight-drop doses of the tincture were given, and continued until May 19th, during which time the pulse scarcely varied at all, but remained about 90, the only noticeable effect of the drug being a diminution in the quantity of urine passed. Dr. Brunton has shown that one of the toxic effects of the drug is to diminish the renal secretion; however, in spite of the small quantity of water passed, the dose was increased to fifteen minims thrice daily; but on the 21st, the flow becoming less, the exhibition of the casca was stopped. The pulse during this time had increased rather than diminished in frequency. It was found that it was only necessary to omit the casca for two days to allow the flow of urine to become normal again. On May 24th fifteen drops were again given three times in the day, and continued till the 31st; but the drug appeared to have lost its effect, for on that day the pulse was at 120 per minute. The tincture of digitalis was substituted, in ten-drop doses. On June 4th the pulse was down to 100, when the digitalis was increased to fifteen drops. On the 9th the pulse was at 50; in consequence the digitalis was stopped, and in a few days the pulse again became rapid—i.e., 100; but now the digitalis had lost its influence, for fifteen- and twenty-drop doses thrice daily failed to bring down the number of beats.

In the next case the drug was pushed much more energetically.

Wm. W——, aged fifty-four, presented unmistakable symptoms of mitral stenosis. Although there was no murmur, yet the rapid, irregular heart, the cyanosed face, the congested lungs, with hæmoptysis and dyspnœa, told a tale of obstruction on the left side of the heart. On the 14th of July, 1879, the heart—counted with the stethoscope, as many of the beats did not reach the wrist—was at 160 per minute, irregular and intermittent. Ten-drop doses of the tincture of casca were given three times a day. On the 17th, the pulse was much steadier, and reduced to 100. All the beats seemingly reached the radial. The quantity of water passed was much increased. The administration of the drug was continued, and larger doses employed, the increase being gradual. On Aug. 1st, thirty drops three times a day were given, and in a few days the dose was increased to thirty-five drops. On the 11th, a week after the maximum dose named had been employed, the pulse was at 110, and very irregular. The drug was then discontinued, the urine being diminished in quantity. On Aug. 16th—no medicine was given in the interval—the heart was beating at the rate of 152 in the minute, 120 of which only reached the radial. Digitalis was then exhibited—twenty drops of the tincture three times a day—the immediate effect of which was to steady the cardiac pulsations, and to render them both slower and more regular; for, on the 18th of the same month, the heart beats were 120, all of which reached the wrist. The digitalis was continued until Sept. 16th, 1879, on which day the patient left the hospital, his pulse much more regular, and at 80 in the minute.

This patient came again under treatment in the hospital on May 25th of the present year, at which time his pulse was at 150, and very irregular. He was ordered ten-drop doses of the casca administered as before, which was increased on June 4th to twenty drops, the pulse remaining unaltered. On the 12th the pulse was steadier, and reduced to 120 in the minute. Then camphor-water was substituted and continued for eight days, during which period the pulse rose again to about 150, and became more irregular, being with difficulty counted. On June 20th the camphor-water was discontinued, and in place twenty-drop doses of the

tincture of digitalis were employed—a larger quantity invariably caused vomiting. On the 28th the pulse was again reduced to 120, but a continuance of the remedy failed to bring about a further reduction.

I have used the drug in several other cases besides those briefly recorded above, but as the trials simply served to strengthen my previously formed impression as regards the therapeutical value of the tincture of cascara, no object can be gained by citing them. To sum up my limited experience of the remedy:—It is undoubtedly a very useful addition to our somewhat restricted list of therapeutic agents in the treatment of cardiac cases, serving, like digitalis, to lower the pulse-rate, and, whilst increasing the force of the systole, to render the heart more regular. In comparing the two drugs, whilst recognising the value of cascara, I think digitalis is the more reliable remedy of the two; it seems to act more rapidly and with more certainty. It may, however, yet be found that the cases in which each drug is to be employed must be selected; some cases requiring perhaps stimulation of the cardio-inhibitory centre in the medulla—cascara,—whilst others may be best suited by a remedy which acts on the peripheral inhibitory apparatus in the heart—digitalis.

In my cases it did not appear that the remedy was cumulative, for in the case of Alice G—— the quantity of urine, which had been very much diminished by the drug, became normal a day or two after its discontinuance. The drug appeared to me to act in the desired manner upon the heart only so long as the quantity of urine was increased.

Sphygmographic tracings in the cases given showed well the high arterial tension as the result of the drug; this was especially noticeable in the first and third of the cases. In Alice G——'s case the tracing, taken whilst the drug was being administered, but without effect, the pulse being increased in rate, showed a low-tension pulse. In a case of thoracic aneurism in which the drug was tried, the effect was an increase in the pain, the result of increased arterial tension.

Newcastle-upon-Tyne.

## FIVE YEARS' SURGICAL WORK IN THE CARDIFF INFIRMARY.

BY ALFRED SHEEN, M.D.,
SURGEON TO THE INFIRMARY.

(Continued from p. 691.)

OPERATIONS for the removal of cancerous growths do not leave a very favourable impression on one's mind. Whatever their immediate results may be, and in some cases I believe these results to be highly beneficial in a variety of ways, the disease, as a rule, either returns at the seat o operation or in some other part, and the patient eventually succumbs to it. One or two cases may be deemed worthy of a more extended record.

S. P——, aged forty-four (Nos. 36 and 37) was admitted in December, 1877, with an enormous sarcomatous tumour in the posterior aspect of the right thigh, extending from the top of the femur nearly to the popliteal space. It was removed under antiseptic precautions. The temperature varied from 99° to 101° for eleven days, after which it became and remained normal. She was again admitted in February, 1879, when another tumour, the size of a small orange, was removed antiseptically, from the upper part of the thigh, and the pulse and temperature were normal throughout. Again, during this year, I have dissected out three nodules, each the size of a small hen's egg.

In the case of T. B—— (No. 41) I had previously twice operated for epithelioma of the lip, after which there was no return of the disease at its original seat, but glandular enlargement supervened at the angle of the jaw, and, unfortunately, he did not seek advice (although cautioned to do so) until it had attained such a size as to render his chances of benefit from further operative interference exceedingly problematical. He was, however, very anxious to have something done, and I removed it partly by the knife and partly by tearing with my fingers. There was considerable venous hæmorrhage. After its removal a large gap was left showing the digastric muscle, the hypoglossal nerve and other structures as they would appear after an elaborate and careful dissection.[1] The man after his discharge had a severe attack of erysipelas of the face, from which he recovered, but he died twelve months after the operation of an extension of the disease.[2]

Of the cases of epithelioma of the penis one was removed by the galvanic cautery, but I was so unfavourably impressed with it that I did not use it again. A clean cut with a knife is far preferable to the eschar produced by the cautery and its subsequent tedious separation.

Of the eye cases, two cases of senile cataract were dealt with successfully by the flap operation, whilst a third, treated by iridectomy and the modified linear incision, was a failure from escape of vitreous and intraocular hæmorrhage. Abscission of the cornea, for a very prominent staphyloma, left a not unsightly stump, upon which a glass eye may at some future time be fixed.

During the removal of a scirrhus of the breast in a woman aged sixty-four, the patient twice became pulseless, but recovered on tilting her up, head downwards.

In the case of popliteal aneurism the femoral was tied in the usual situation with carbolised catgut, and the wound closed with styptic. No chloroform was given.[3]

BONE.

| | Under ten. | Under twenty. | Under forty. | Under sixty. | Totals. |
|---|---|---|---|---|---|
| Lower jaw | 0 | 0 | 2 | 0 | 2 |
| Face | 1 | 0 | 0 | 0 | 1 |
| Hand | 0 | 1 | 1 | 0 | 2 |
| Elbow | 0 | 1 | 0 | 0 | 1 |
| Humerus | 0 | 1 | 0 | 0 | 1 |
| Femur | 0 | 5 | 1 | 0 | 6 |
| Tibia | 1 | 0 | 1 | 1 | 3 |
| Tibia and fibula | 0 | 1 | 0 | 0 | 1 |
| Periostitis: Tibia | 1 | 1 | 2 | 0 | 4 |
| Foot | 0 | 3 | 1 | 0 | 4 |
| | 3 | 13 | 8 | 1 | 25 |

In this division there were eighteen males and seven females; no deaths. In these cases, where operations have been performed, Esmarch's bandage has always been used, and with great advantage, making the operation as plain as though it had been performed on the dead body. The chisel and hammer have also been resorted to in place of the usual bone instruments, in cutting through new bone and in dividing large pieces of necrosed bone, and in some cases I greatly prefer this method of proceeding. Lint steeped in carbolised oil (1 to 10), stuffed into the wound, has been the usual mode of dressing for some days, and in some cases I have used terebene in place of the carbolised oil with advantage. It has answered as well, or better, and certainly has a more agreeable odour. I think we may be, at times, too hasty in interfering with diseased bone, especially in the hand and foot, for I have cases under my observation which go to prove that, by patience, the use of the stiff bandage and long-continued expectant treatment we may sometimes fairly assume that such cases will recover without operative interference. I had one such case in 1878 of disease of the bones of the foot, and that patient, under the treatment I have here indicated, is now nearly well.

JOINT.

| | Under ten. | Under twenty. | Under forty. | Under sixty. | Totals. |
|---|---|---|---|---|---|
| Hip | 4 | 7 | 3 | 0 | 14 |
| Knee | 8 | 8 | 6 | 2 | 24 |
| Ankle | 0 | 2 | 1 | 1 | 4 |
| Hip and knee | 0 | 0 | 1 | 0 | 1 |
| Synovitis: Knee | 0 | 2 | 1 | 0 | 3 |
| ,, Ankle | 0 | 1 | 0 | 0 | 1 |
| Wrist | 0 | 1 | 0 | 0 | 1 |
| Metacarpo-phalangeal | 0 | 0 | 1 | 0 | 1 |
| Sacro-iliac | 0 | 0 | 0 | 1 | 1 |
| Hysterical knee | 0 | 1 | 0 | 0 | 1 |
| | 12 | 22 | 13 | 4 | 51 |

The cases of joint diseases were equally divided between males and females. As one would expect, the majority of the cases were of the hip and knee, diseases of other joints

[1] An almost exactly similar case, under the care of Mr. Durham, at Guy's, is recorded in the Guy's Hospital Gazette, vol. vii., p. 139.
[2] Reported in THE LANCET, vol. i., 1876, p. 601.
[3] This case is reported in THE LANCET, vol. ii., 1876, p. 222.

being, as a rule, treated as out-patients. There were four deaths. Ellen G——, aged thirty-nine; knee; died from phthisis. Llewellyn P——, aged fifteen; hip; from exhaustion. Richard T——, aged thirty-three; hip; suddenly, in convulsions, chiefly of the right side. Thomas O——, aged twenty-five; hip; exhaustion.

Nine operations were undertaken in this class, these cases being tabulated under the headings "Operations" and "Amputations for Disease." Remarks on the dressings and modes of operation will be found under those headings.

W. D——, aged fifty-seven; removal of a diseased astragalus. Patient recovered with a useful limb.

W. S——, aged forty-eight; disease of knee; Carden's amputation. Discharged with a capital stump in forty-eight days.

Leonard J——, aged five years and a half; diseased knee, with suppuration and external wound, and great exhaustion. Amputation by modified circular method above knee, and discharged well in forty days.

Albert W——, aged twenty-three; disease of knee; excision. Drainage-tube and carbolic-oil dressings. P. H. Watson's splint and gum-and-chalk bandage. Styptic colloid and charpie over line of incision, on removal of which some days after this line, except at its extremities, was found completely healed. This case failed from there being some slight movement at the knee, and he was to be admitted again for further treatment, but disappeared from observation.

The case of fibrous anchylosis at the hip and knee affords several points of interest. The patient was a woman, aged twenty-eight, whose confinement twelve months previously had been followed by severe pelvic cellulitis, with discharge of pus through the right groin. She had a miserable home, and had been badly attended to. On admission, the left knee extended to its utmost limit was ten inches from the bed level, and the right hip and knee were flexed to nearly right angles, and rotated outwards. After her general health had improved, she was placed under chloroform, the hamstring tendons on the right side divided, and the adhesions at the hip broken down by manipulation until the limb was in a fairly straight position. The adhesions at the hip gave way with a loudish crack, and without much force being used. Before the patient's removal back to bed a Liston's long splint was applied. On the evening of the day of operation, and all next day, the patient appeared in a most critical position, with a pulse of 164, scarcely perceptible, and complaining of great pain in the *left* knee, which was relieved by the removal of a splint previously applied. These alarming symptoms gradually passed away. No pain was complained of in the *right* limb until some days after the operation, and then not much, but she became unruly, and insisted upon having the splint removed, and would scarcely allow the limb to be touched from that time forward. The limb went back to its old position, the skin behind the right knee sloughed, an abscess formed here, the joint became disorganised, and she was rapidly losing ground. Amputation was advised, but she and her husband persistently refused their consent. Finally she rapidly regained strength, got fat even, and went out of the infirmary in the same state as she was admitted, so far as her deformity was concerned, much to my chagrin. It was a mistake to put the limb up in splints immediately, but I cannot think that this was the whole and sole cause of failure.

Hip cases are a severe strain upon the resources of a small institution like our infirmary, where we only make up from fifty to sixty beds, the town population alone being upwards of 80,000. Yet, surely, they are proper cases for in-door treatment. In order that they may be cured they require a certain line of treatment persistently carried out "under orders"; and this, considering the class of patients one has to deal with, cannot be done unless they are continually under intelligent observation, which cannot be the case at their own homes.

Hip cases, as a rule, were treated in the first instance by rest in bed and the application of Liston's long splint, or a weight and pulley, and subsequently by the application of a stiff bandage. One case, in a boy aged seventeen, was successfully dealt with by Sayre's splint. One knee case, in a female aged thirty-nine, died of lung mischief, the joint symptoms apparently improving. In an ankle-joint case in a man aged fifty-seven, the joint was cut into and the astragalus alone found diseased; this was removed, and he finally recovered with a useful foot. Carbolic oil was used, but not the spray or gauze.

In early knee cases the plaster-of-Paris or gum-and-chalk bandage has been chiefly resorted to. I prefer them to Hyde's poroplastic splints, which, after being worn for a short time, give way to some extent.

BURSÆ AND TENDONS.

| | Under twenty. M. | F. | Under forty. M. | F. | Under sixty. M. | Totals. M. | F. |
|---|---|---|---|---|---|---|---|
| Contracted tendons: fingers | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| False anchylosis: ankle | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Contracted hamstrings | 2 | 0 | 0 | 0 | 0 | 2 | 0 |
| Housemaid's knee | 0 | 3 | 0 | 2 | 0 | 0 | 5 |
| Effusion in sheath of tendons: hand | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Ditto: inner ankle | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| | 2 | 4 | 2 | 2 | 1 | 5 | 6 |

In the first case the finger which was most in the way was amputated at the earnest request of the patient, and he was well satisfied with the result so far as improved use of his hand was concerned. The cases of housemaid's knee were cured or much relieved by rest.

| | Under ten. F. | Under twenty. F. | Totals. F. |
|---|---|---|---|
| Varus | 0 | 2 | 2 |
| Equino-varus | 1 | 1 | 2 |
| | 1 | 3 | 4 |

In the two cases of equino-varus the tendo Achillis was divided subcutaneously, and this treatment, with the subsequent application of stiff bandages, was successful in effecting a cure in one case, but in the other, aged eleven, owing to a difficulty with the parents, the child did not remain sufficiently long under observation to obtain a satisfactory result. The varus cases were mild; one, aged fourteen, was put on tonic treatment and frequent exercise under observation, and was discharged cured, without any operation. The other case was evidently hysterical, and was much improved by ten weeks' stay in the infirmary and general treatment.

ULCERS.

| | Under ten. | Under twenty. | Under forty. | Under sixty. | Over sixty. | Totals. |
|---|---|---|---|---|---|---|
| Face | 1 | 0 | 0 | 0 | 0 | 1 |
| Hand | 0 | 0 | 0 | 1 | 0 | 1 |
| Groin | 0 | 0 | 1 | 0 | 0 | 1 |
| Thigh | 0 | 1 | 2 | 1 | 0 | 4 |
| Leg | 0 | 4 | 21 | 13 | 3 | 41 |
| Ankle | 0 | 0 | 2 | 0 | 0 | 2 |
| Heel and foot | 0 | 1 | 0 | 1 | 1 | 3 |
| Scrotum | 0 | 0 | 2 | 0 | 0 | 2 |
| | 1 | 6 | 28 | 16 | 4 | 55 |

Ulcers I have classified according to their seat. Twenty-one were in women and 34 in men. The three thigh cases were all in women. Ulcers of the leg, occurring in the middle period of life, made up the great bulk of these cases, and they were of the usual varieties—eczematous, varicose, simple, indolent, specific. The usual treatment of ulcerated legs has been rest in bed on an inclined board, cleanliness, bandaging, in some cases strapping, and various local applications according to circumstances—carbolic oil, lotio rubra, boracic ointment, zinc ointment, &c. One is well repaid by directing a little attention to these local applications; indeed in this, and in other directions of treatment, we are far too apt, from the cases being so common and so numerous, to lapse into a system of careless routine which is anything but beneficial to the patient. *Carbolic oil* is a useful early application in some cases, but it must be borne in mind that it delays cicatrisation, and when it has served its purpose, some other application, as *lotio rubra*, which is most useful in aiding granulation and cicatrisation, should be resorted to. *Boracic ointment* is a valuable application in some cases, and acts admirably as a deodoriser of foul discharges, or rather as a preventer of their becoming foul. I have not yet treated ulcers on Lister's antiseptic method, but intend doing so; *Martin's elastic bandage* has been chiefly of value in the varicose variety; in such cases it answers admirably. Where there has been any constitutional dyscrasia, obvious or suspected, *internal treatment* has been adopted

to aid the cure. If eczema is present, *arsenic* has been given with advantage; and so also *opium*, where pain is a dominant symptom. When the ulcer is specific *iodide of potassium* acts often like magic, and where there is any suspicion of such connexion it is wise to give it to aid the diagnosis. In some cases it clears up matters wonderfully. I have known cases which, after being under various kinds of treatment for a lengthened period, have healed up in a week or two under iodide of potassium and simple dressing. On the healing of varicose and some other ulcers, if you have an intelligent patient to deal with, I strongly approve of an *elastic stocking* being worn, but it should be adapted before the patient leaves the hospital, to ensure its fitting properly, and he should be cautioned about its proper use. In almost all cases, under rest, good and regular diet, and the avoidance of all irritating applications to the ulcer (which, as a rule, have been pretty freely applied before the patient's admission), rapid improvement is observed. In some cases of indolent ulcer, *blistering* has been followed by beneficial results. The application of a *splint* has sometimes been of value by keeping the parts at rest, and one obstinate case, where the ulcer was situated at the lower part of the back of the leg, was cured by relaxing the tendo Achillis by means of a slipper, and a strap extending from it to above the knee. The practice of *skin-grafting* has been adopted in suitable cases, and the results in some of them have been everything that one could desire. The heel case was chronic and extensive, the result of injury a long time previously. The patient had been unable to work for five or six years, and craved to have the foot removed. Amputation in the lower third of the leg, taking a long anterior flap, was performed antiseptically, catgut ligatures and sutures being used; the stump was dressed four times; the temperature was normal throughout, and in eighteen days the patient was up, being discharged with an admirable stump ten days later. One case of scrofulous ulceration of the face was attacked by erysipelas, and this case showed the value of aconite in small and frequently-repeated doses in this disease, for, under its use, in two days the temperature was normal. Nitrate of silver, four grains to the drachm, was applied, to see if it would stop the erysipelas from spreading. It did not have this effect, neither did I expect that it would. Aconite in small and frequently repeated doses, as advised by Ringer, will, as a rule in such cases, meet all the indications, without any other treatment, general or local.

*(To be concluded.)*

## NOTES ON PATHOLOGY OF THE URINE.

BY CHARLES A. CAMERON, M.D., F.R.C.S.I.,
PROFESSOR OF CHEMISTRY AND HYGIENE, R.C.S.I., MEDICAL OFFICER OF HEALTH, DUBLIN.

### SULPHURETTED HYDROGEN AND AMMONIA IN URINE.

I HAVE not met with any account of the persistent occurrence of free sulphuretted hydrogen in the urine, but a case of the kind has come under my own observation. A gentleman in the middle period of life, of active business habits, and discharging the duties of a most onerous public appointment, has been for many years past frequently under medical treatment. His complaints are always of a somewhat indefinable nature. He suffers from malaise, a painful feeling of fatigue, and sometimes from want of appetite, but he is rarely confined to his bed or even his room. He works away steadily. He has been treated medically by Dr. Samuel Gordon, ex-president of the College of Physicians, who has enabled me to make examinations of his patient's urine. Now, there was nothing peculiar in the urine with respect to its specific gravity, amount of urea, or other points, with but one remarkable exception: it contained free sulphuretted hydrogen the moment it was passed. On one occasion I had the opportunity of examining this urine within a minute after it had been passed, and found, both by chemical tests and by smell, the presence of free sulphuretted hydrogen in it.

The amount of sulphuretted hydrogen was determined on two occasions: on the first it was found to exist in the ratio of 1·4 cubic centimetres per litre, and on the second occasion 1·9 cubic centimetres per litre of urine. These proportions are about one-third of the quantities found in very weak sulphuretted waters (Spas).

The period which elapsed after the discovery of the sulphuretted hydrogen in this urine until its disappearance was somewhat more than two years. During nearly the whole of this time the urine was never free from sulphuretted hydrogen; at least, every time it was examined or analysed such was found to be the case.

So soon as the sulphuretted hydrogen disappeared, its place was taken by ammonia; the instant the urine was passed it was found to have an ammoniacal odour. This state of things continued for about two years; but lately the urine has no longer an ammoniacal odour.

About the time that this sulphuretted hydrogen urine was being passed, Surgeon Hazleton of Westland-row, Dublin, introduced to me a young lady, from whose skin sulphuretted hydrogen was exhaled. I placed upon her skin pieces of bibulous paper, containing acetate of lead, and in the course of a few hours they were blackened. When she was warm after exertion the odour of sulphuretted hydrogen from her was unmistakable. Silver coins, thimbles, &c., kept in her pockets soon became black. She was in good health. Her urine contained no sulphuretted hydrogen; whilst, on the other hand, no odour of sulphuretted hydrogen could be observed from the skin of the gentleman whose urine contained sulphuretted hydrogen. In the case of the lady the exhalation of sulphuretted hydrogen lasted for about three years, and then completely ceased.

### INTERMITTENT OCCURRENCE OF SUGAR IN THE URINE.

I make, now and then, examinations of the urine of a gentleman nearly sixty years old. Sometimes its specific gravity is from 1025 to 1037, and sugar in large quantity is present. At other times the specific gravity is from 1020 to 1023, but not a trace of sugar can be detected in it by any method. Sugar is more frequently present than absent. The quantity of urine passed per diem is generally, but not invariably, above forty ounces. Dr. Garrod has examined this gentleman.

### LOW SPECIFIC GRAVITY OF DIABETIC URINE.

Many years ago I examined several times a week during some months the urine of a young man (a patient of Sir George B. Owens), who ultimately died from diabetes mellitus. As a rule, the specific gravity of his urine rarely rose higher than 1030. He had an incessant and unallayable thirst. On one occasion I found his urine to have a specific gravity of 1005, sugar being present in small but decided quantity. The low gravity of the urine surprised the medical attendant, who indeed at first was incredulous that diabetic urine could have so low a gravity. The specific gravity of the urine was carefully determined by the specific-gravity bottle and by the hydrometer, and, unless the patient put water into the specimen (which was highly improbable), there was no other source of error. On questioning the patient, he stated that on the day upon which the specimen of urine was passed his thirst was so great that he drank water incessantly. He believed that he must have swallowed a gallon and a half during the day.

## FIFTEEN CASES OF DIPHTHERIA.

BY FREDERICK H. DALY, M.D.

I CAN offer no explanation as to why such a number of cases of diphtheria should occur in my practice within a short period, while several medical men around in large practice, to whom I have spoken, have had no cases. It is also remarkable that my cases have very little relationship, as far as locality is concerned, and they all were in the families of well-to-do people. All the houses in which they occurred had two insanitary conditions—viz., first, there was only one common cistern for drinking and closet purposes; and, second, the sink in the kitchen or scullery communicated *directly* with the drains. I cannot help connecting this outburst of the disease with the prolonged drought which we have had, and the consequent want of flushing of the drains or sewers. I would call attention to Case 4, as proving that the incubation period of diphtheria may be only three days.

CASES 1 and 2.—On April 27th I was called to see two children in Bouverie-road, Stoke Newington, the house being the last but one in the road, having the open country beyond. The younger of the two, aged eight years, had been ill for four days, and had slept with her sister, aged ten years. Both cases were mild. There was a good deal of false membrane on the tonsils, fauces, and velum palati in the younger child, and on two occasions traces of albumen in the urine. In both cases the temperature varied from 101° to 103°, and the pulse from 120 to 130. The pulse of the younger child was very feeble during the second week, and there was considerable glandular enlargement in the neck. The treatment used in these two cases was large doses of tincture of perchloride of iron and chlorate of potash internally, and glycerine of carbolic acid applied to the throat. Ice to suck, and plenty of port wine, beef-tea, and milk. In this house I found that previous to the attack the closet had been out of order for a week. There was no water, from something having gone wrong with the closet-wire.

CASE 3.—On the 8th of May I saw for the first time Mrs. W——, aged sixty-eight years. She was visiting at Albion-road, Dalston. She complained of slight sore-throat and cough; she was a little feverish. On examination the throat was a little inflamed; there were other symptoms of catarrh. Ordered a saline mixture. On the 9th she felt much better, and the throat was comfortable. I did not therefore examine the throat. With the stethoscope I heard some coarse mucous râles. On the 10th there were more distinct bronchial symptoms, and *no complaint was made about the throat*. Ordered bark and ammonia. I saw her again on the evening of the 10th. She was then very restless and coughing; temperature 101·6°. On the morning of the 11th, at 11 A.M., I again saw her. She was much worse, and complained of her throat, and of great difficulty of swallowing. I found now that both the tonsils and the back of the fauces, as far down as I could see, were covered with a thick diphtheritic exudation. The pulse was good and the temperature slightly subnormal. To take as much stimulants as possible. At 4 P.M. Dr. Wilson Fox saw the lady with me. She had grown worse rapidly since the morning; the disease had extended to the larynx, the face and left hand were getting livid, and very little air entered the left lung. The question of tracheotomy was discussed by Dr. Wilson Fox and myself, and decided against. The patient died during the evening.

CASE 4.—Miss W——, daughter of the last patient, came to be with her mother on the 10th of May, and certainly kissed her mother on that day. I saw this lady on the evening of May 13th, exactly three days from the time she came to attend her mother, and she had undoubted diphtheria. There were distinct patches of false membrane on the throat. Temperature 103°. She was removed the same evening into a private ward in a hospital, and recovered.

CASES 5, 6, and 7.—These occurred at the same house in Mountford-road, Hackney. Mrs. B——, who had been confined on the 6th of May, complained of sore-throat on May 15th, so also, on the same day, did her eldest son, aged eight years. Both cases were slight, and there was not much exudation on the throat. On May 19th, four days after the mother was taken ill, the nurse called my attention to the infant's navel. The funis had separated, and round the navel was a red circle as large as the top of a tumbler, and this was covered with a shreddy diphtheritic exudation perfectly characteristic. It was not easy to examine the throat, but, as far as I could see, there was membrane there also. The infant died on the fourth day. The mother and son recovered. The treatment was the same as in cases 1 and 2.

CASES 8, 9, 10.—I was called on the 14th of May to see Mrs. G——, living in a large roomy house, having the open country behind it, in Lordship-park, South Hornsey. I found her suffering from a severe attack of diphtheria. She was very ill, temperature 103·2°, with a good deal of exudation on the throat. The glands of the neck were intensely painful and much swollen. She recovered very slowly, and is much shattered in health by the attack. No albumen and no paralysis. She was of course isolated, but on the 22nd her second daughter, aged thirteen years, was attacked very seriously. The entire throat was covered with false membrane, which extended over the roof of the mouth. Temperature 102·2°; pulse 112; the latter became so feeble after a few days that it could scarcely be felt. Urine feebly albuminous twice. Could only swallow with the greatest difficulty. Glands painful, and considerable aphonia. The treatment was, as in the other cases, plenty of wine, steel and chlorate of potash, ice, beef-tea, milk, and glycerine of carbolic acid applied to the throat; she also had the throat frequently sprayed with warm Condy's fluid and water. She is recovering slowly, the pulse being still almost imperceptible. On May 28th, her sister, aged fourteen years, had several characteristic patches on the throat, but was not at all ill. Temperature 99°; pulse 80. The state of the throat continued for several days, and then cleared off, the patient all the time feeling fairly well.

CASES 11 and 12.—Agnes B——, aged eight years, was attacked with a sickness and sore-throat on the 25th of May. She had had scarlet fever two years back, but her mother thought she must be getting it again. Her temperature was 103°; pulse 120. There were several large diphtheritic patches on the throat, the tongue was swollen, and she could scarcely swallow. The urine was highly albuminous. The treatment was the same as in the other cases. On the fourth day her nose bled profusely. She said she felt much better. The throat cleared; the temperature was 98°; pulse 76. The albumen disappeared from the urine, and, beyond weakness, the patient was well on May 31st. Her sister Lilly sickened two days later, and made a speedy recovery.

CASES 13, 14, and 15.—These were all mild, requiring no particular remarks. One was in Albert-road, Dalston, and the house was nearly opposite to that in which cases 11 and 12 were. The other two cases were in Stoke Newington.

It will be seen by the above necessarily brief notes (for I have omitted all details) that in less than a month fifteen cases of diphtheria occurred in my practice, two proving fatal. In all the cases isolation was insisted on, and disinfection with carbolic acid carried out fully. I also advised the various members of each household to gargle their throats very frequently with Condy's fluid and water, and to these precautions I attribute the escape of the other members of the different households. In the houses in Albert-road, there were eleven persons living in one house, and only one had the disease, and in the other house eight persons lived, and but two had diphtheria. None of the patients have as yet developed diphtheritic paralysis.

Queen's-road, Dalston.

## TARSAL TUMOURS TREATED BY ELECTROLYSIS.

BY JULIUS ALTHAUS, M.D.

ON February 6th, 1880, Mr. White Cooper sent a lady, aged thirty, to me, who suffered from tarsal tumours occupying nearly the whole of both upper eyelids, and which had become gradually developed during the last six months. They looked inflamed, were very disfiguring, and caused considerable annoyance by interfering with the proper action of the eyelids, which felt very heavy. Under these circumstances Mr. White Cooper recommended the removal of the growths by electrolysis. As the conjunctiva was involved by the tumour and was excessively sensitive, reflex action in the lid being very much increased, I thought it best to perform the operation under anæsthesia, and therefore procured the assistance of Mr. Clover, who put the lady very quickly under the influence of his anæsthetic mixture. I then applied both poles of the voltaic battery by means of my four-pointed electrolytic needle-conductors alternately to both tumours, so that each of them received the influence of the cathode and anode successively. Twenty cells of Becker-Muirhead's battery were used for ten minutes, after which the whole of the tumours, both inside and outside, appeared completely shrivelled up.

Not a drop of blood was lost at any stage of the operation, which was particularly remarkable when the subconjunctival portion of the tumour was acted upon, as this was highly vascular. The surface of the lids was covered by goldbeater's skin and flexile collodion. The patient recovered quickly from the influence of the anæsthetic, and went the same afternoon to her home in the country. She called upon me again on March 4th, about a month after the operation, when I was gratified to find that the success had been complete. The tumours had entirely vanished; no scar was visible anywhere, and no eversion of the lids had occurred. Both eyelids had, indeed, a perfectly normal appearance.

Tarsal tumour is a troublesome affection and does not yield to external applications, such as the red precipitate or iodide

of potassium ointment; so that, if removal becomes necessary, free incisions have to be made which are generally accompanied by considerable bleeding. The adhesive inflammation which supervenes upon the operation has sometimes to be increased by touching the interior of the cysts with nitrate of silver; and if the tumour be situated near the margin of the eyelid and the punctum, there may be cicatricial shrinking after the operation, and eversion of the edge of the lid, with displacement of the punctum. All this makes the ordinary operation for tarsal tumour a somewhat formidable one; and electrolysis would therefore appear far preferable. The complete absence of bleeding in the latter procedure is a great advantage, as the operator sees much better what he is doing, and can regulate the action of the galvanic force with the greatest nicety. A single application appears to be sufficient for a cure, and there is no danger of cicatricial shrinking afterwards, provided the operation be properly performed. In a case where only the skin of the eyelid would be affected, I should not resort to anæsthesia, as then the pain would not be severe; but the great sensitiveness of the mucous membrane in the above case rendered anæsthesia desirable.

Bryanston-street, Marble Arch, W.

# A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

## ST. GEORGE'S HOSPITAL.

THE following are among some of the cases, under the care of Mr. CARTER, in the Ophthalmic Wards.

### SOFT CATARACT IN ONE EYE, AND A HIGH DEGREE OF MYOPIA IN THE OTHER, BOTH RECENT.

The patient, a man aged twenty-four, eighteen months ago was tested for the army, and the sight of each eye was found to be perfect. Five months ago he noticed that the sight of the left eye was failing, and a month later that he had a difficulty in making out distant objects with the right. When admitted, the right eye was much larger than the left, especially in the antero-posterior diameter. Myopia = 16 D, and there was a large posterior staphyloma. The left eye resembled a hypermetropic eye in size and shape. The lens was universally opaque. The latter was removed by suction.

### DISLOCATION OF THE LENS INTO THE VITREOUS.

The patient, a man aged sixty-four, received a blow on the eye. Vision was immediately reduced to perception of light. When admitted, there was conjunctival injection, a tremulous and inactive iris, and the fundus oculi could not be illuminated. Four days later, no details of fundus were visible, and there were floating filaments in the vitreous. The lens was not visible. Vision: counts fingers at three feet.

## VICTORIA DOCK DISTRICT DISPENSARY.

### CASE OF MALFORMATION OF HEART AND ABSCESS OF BRAIN; UNUSUAL CONTENTS.

(Under the care of Mr. JULIUS CÆSAR.)

E. M——, aged nine, first came under observation in December, 1879, with the following history:—He was a full time and healthy child when born. At three months old his mother noticed that his cheeks, a circle round lips, the tips of fingers and nails, were very blue, and that the colour increased if he were excited or cried. At the same time the ends of the fingers and the toes began to enlarge.

These symptoms increased, but otherwise he appeared to enjoy good health up to about twelve months old, when a discharge, not offensive, from the left ear took place. At this time, also, he used to clutch his head as if it were the seat of great pain, and when old enough to make himself understood used to complain of great pain there. When eighteen months old he had measles, bronchitis, and pneumonia, but appeared to recover from them fairly well. When three years old he had completed dentition. The discharge from the ear now ceased, and he began to walk; he was not at any period able to walk more than half a mile without fatigue and difficulty in breathing. Between five and six years his mother noticed, for the first time, that he dragged his right leg as if he had not power at the hip to lift it. Shortly after this his right wrist began to fail, then his forearm, and, finally, his entire arm. Then the leg became affected, the paralysis appearing to begin in the hip, and gradually extending to the foot, till at seven years and a half he had lost all power over these extremities, which about this time got acutely sensitive, so much so that the least movement of them caused him to cry, even touching them appeared to give him great pain. He had never talked plainly, but about seven years his articulation got very difficult and hesitating, till at last he could utter only half words. As for "mother" he used to say "mur," and for "father" "f-a-a." At all seasons of the year he felt cold to the touch, and used to complain of feeling cold, though clothed in flannel.

On August 18th last he had a convulsive fit during the night. When seen in the morning he was in bed comatose, and quite unconscious, the pupils were widely dilated, and his forehead suffused with a very deep blush. The pulse was rapid, full, and strong. He was unable to swallow even liquids. All his evacuations were passed involuntarily. He remained in this state for five days, and then appeared to get a little better, took some milk and egg, and seemed to recognise those about him. This continued for three days, when he relapsed into his former state of unconsciousness, which lasted till he died on August 31st.

At the necropsy thirty hours after death the pulmonary artery was found to communicate with the aorta a little way above the attachment of the two most left semilunar valves by an opening about the size of a sixpenny piece. These valves were perforated in several places. The ascending part of the aorta was as big as that of an adult. No murmurs were heard during life. The right lung was adherent to the thoracic wall and diaphragm, and both were the seat of tubercle. In removing the brain great difficulty was experienced in detaching the calvaria, so adherent was the dura mater to it. On examining the brain tubercles were seen scattered all over the base, and in the ventricles and fissures of Sylvius. The right hemisphere of the cerebrum was quite pulpy, the anterior part of the left hemisphere was in a like condition, but the middle and posterior lobes were quite hard except at one spot in the latter lobe, which was quite soft and fluctuated on pressure. On cutting into this spot it proved to be a large abscess extending from the middle cornu to the posterior cornu of the lateral ventricle, but not entering it. On examining the abscess it was found to contain a dense calcareous mass weighing 120 grains. The walls of the abscess were impregnated with a like material, and grated on the knife when cut. The remainder of the brain presented no pathological changes of importance.

*Remarks.*—The principal points of interest in this case were (1) the unusual form of heart malformation; (2) the existence of large perforations in the semilunar valves, unaccompanied by murmur; (3) the existence of so much brain mischief with comparatively so few symptoms.

## QUEEN'S HOSPITAL, BIRMINGHAM.

### COMPOUND COMMINUTED FRACTURE OF THE HUMERUS; LISTERISM; RECOVERY.

(Under the care of Mr. JAMES F. WEST.)

THE following cases, of which the notes are abridged from those taken by Mr. J. W. Moore, house-surgeon, serve to illustrate the advantage of the antiseptic treatment in severe compound and comminuted fractures.

Charles F——, aged thirty-five, a saddler, was admitted on July 10th, 1880. He had been thrown off the top of an omnibus, and had fallen with his left arm doubled under him. The humerus was fractured just above the insertion of the deltoid, and again about three inches lower down. There were two small wounds on the inner side of the arm at the upper third, a little towards the back. He had lost about a pint of blood, and there was considerable shock. A piece of bone, about two inches in length and one-third of the circumference of the shaft of the humerus, protruded

from the upper wound, and, being loose, was easily removed; it was quite denuded of periosteum.

The patient was at once placed in bed; the wounds were syringed out with carbolic-acid solution (1 to 50), a fine silver suture was introduced into each wound, and the protective gauze &c. were applied after Lister's method, under the spray. The arm and forearm were bandaged in the extended position, with an inner and an outer straight splint, the limb being elevated and placed on a pillow. Evening temperature 98·4°; pulse 110. He had a comfortable night, and the temperature next day was 99° in the morning and 99·8° in the evening. Pulse 100; respiration 24.

The wound was dressed for the first time (under spray) on July 12th, when the sutures were removed, and a small drainage-tube was introduced into the upper wound. Evening temperature 100°; this was the highest temperature registered. The patient was comfortable and free from pain.

On the 13th and following days the temperature was, without a single exception, normal.

The wound was dressed for the second time on the 15th; the lower wound was healed and the upper wound discharging only a little serum, and there was no pain excepting when the wound was dressed. The third dressing was on the 19th, under spray. A small quantity of pus was found on dressings, but there was no redness, œdema, or tenderness up the arm. It was dressed again on the 23rd, when there was scarcely any discharge of pus. The drainage-tube was left off. An inner splint of gutta-percha (with a window in to dress the wound) was made, extending from the axilla to the wrist, and embracing half the circumference of the limb, the long straight splint on the outer side being still retained. The wound was now easily dressed without any disturbance of the parts, and on the 30th, as it was quite sound, dry carbolic gauze was substituted.

On Aug. 2nd the wounds were quite solid; the forearm was bent to a right angle with arm. Gutta-percha splints were applied, and the patient was discharged in good health. The arm was in good position, and a fair amount of union had taken place. He attended as an out-patient for the next few weeks, and at the end of two months was able to resume his trade.

WOUND OVER THE PATELLA, WITH A SMALL PIECE CHIPPED OUT OF THE PATELLA; LISTERISM; RECOVERY.

(Under the care of Mr. JAMES F. WEST.)

Geo. J——, aged forty-two, a horsekeeper, was admitted on July 19th, suffering from a kick over patella from the hind leg of a horse. The wound was one inch in length, transverse, and had contused edges, all structures being divided down to bone, and a small splinter being chipped out. The bursa patellæ was readily explored with finger. The wound was syringed out under spray with carbolic lotion (1 to 50), and two silver sutures were applied. No drainage-tube was inserted. Dressed antiseptically. A Back splint was applied and the limb fixed with sand pillows, and he was confined to bed. The temperature was never higher than 99°. The patient slept well, and had no pain worth mentioning. He was dressed for the first time on the 21st, when the wound looked well and was free from redness and irritation. He was again dressed five days afterwards, and the sutures were removed; the wound was healed. At the next dressing dry gauze was placed on the wound. The patient was discharged cured on Aug. 2nd, with a cicatrix firm and solid, and the skin freely movable over patella. At no period had there been any bursitis or synovitis. The patient was ordered to wear the back splint for a few days longer.

## NEWARK HOSPITAL.

FRACTURE OF INNER CONDYLE OF RIGHT HUMERUS; PERFECT UNION.

FOR the notes of this case we are indebted to Mr. J. D. T Reckitt, house-surgeon:—

Henry G——, aged nine years, was seen as an out-patient on April 20th, 1879. He stated that whilst running at full speed he fell down, with both arms extended, and that the inner sides of both elbows came into violent contact with the pavement. There was great swelling of the elbow and parts about the inner condyle of the right humerus; motion of the elbow-joint was somewhat impaired and very painful. Upon close examination, the inner condyle was found to be broken off and quite movable beneath the integuments, but there was not sufficient broken off to involve extensive fracture into the elbow-joint.

An inner angular splint was applied, and a pad of lint to maintain the broken fragment in position. The arm was kept at perfect rest, and cold lead-lotion applied. The swelling and pain quickly disappeared, and on May 15th the splint was removed, the condyle having become firmly united and not to be detected by manipulation. Passive motion was applied, and in a week longer he was able to use the arm as usual.

*Remarks by* Mr. RECKITT.—That bony union occurred so soon after the injury was somewhat surprising, more particularly as the boy was only just recovered from a very severe attack of typhoid fever; and in these particular fractures union, I believe, is often difficult to obtain and sometimes not obtainable.

# Medical Societies.

## ROYAL MEDICAL & CHIRURGICAL SOCIETY.

*Amœboid Movements of the Colourless Blood-corpuscles in Leuchæmia.—Nature and Treatment of Genu Valgum.*

THE ordinary meeting of this Society was held on the 9th inst., J. E. Erischen, Esq., F.R.S., President, in the chair. A suggestive contribution to the pathology of leuchæmia was made by Dr. Cavafy, who has observed a remarkable lack of amœboid movements of the leucocytes in a case of this disease. A paper by Mr. Brodhurst upon genu valgum, in which he discountenanced osteotomy, gave rise to a rather spirited discussion, Mr. Savory supporting the author in his strictures upon the prevalent practice of this operation, which was, on the other hand, upheld by Mr. Barwell and Mr. Parker, and, with certain reservations, by Mr. Haward.

A paper was read upon "Amœboid Movements of the Colourless Blood-corpuscles in Leuchæmia" by Dr. JOHN CAVAFY. The observations described in this paper were made on the blood of a patient suffering from leuchæmia, who was in St. George's Hospital, under Dr. Whipham, from April 30th to July 18th, 1879. The patient, a man aged twenty-six, states that he had been well, with the exception of occasional sick headaches, until a month before admission, when he began to feel extremely weak and languid. He got a cough a little later, and a week before he came he had hæmorrhages in the conjunctivæ and skin after severe retching. On admission he was found to be very pale, mucous râles were heard over the lungs, and a soft systolic murmur at the base of the heart. There were enlarged lymphatic glands in the axillæ, over the right clavicle, and in the right groin. The blood contained a large excess of colourless corpuscles, the proportion to the coloured being as one to six. During his stay in the hospital he became gradually worse, with occasional temporary improvement. He had epistaxis, and fresh hæmorrhages in the conjunctivæ and skin on several occasions. The spleen was not at first enlarged, but became so later, as also did the liver. The glands subsided a little at first, but again soon enlarged, and fresh ones appeared, especially in the neck and near the angles of the lower jaw. The pulse was always quick, and the temperature nearly always above normal. After leaving the hospital he improved slightly at first, but soon became worse again; the glands became of enormous size; there were numerous cutaneous hæmorrhages, and he became gradually weaker, dying early in October, 1879. There was no post-mortem examination. The blood was examined to determine whether the amœboid movements, which characterise healthy colourless corpuscles, were preserved. Twelve observations were made in all, at various intervals, from May 16th to July 14th,

the hot stage being used. The total number of colourless corpuscles in the field of the microscope was first counted, and the number of amœboid corpuscles noted about every ten minutes, usually for half an hour on each occasion. The mean of these was then taken, and the percentage calculated, the results being tabulated in the paper. In determining whether amœboid movements occurred, a very slight departure from the spheroidal shape was considered sufficient; but other observers might have been disposed to refer some of these very slight changes of form to pressure of the cover-glass, which would reduce the proportion recorded in the table. It was found that the character of the movements was much changed when they occurred at all, as they were very sluggish and ill-marked, although the observations were made at fever temperatures which stimulate normal corpuscles to great activity. It only now and then happened that one or two corpuscles showed comparatively active motions. The blood contained the three kinds of colourless corpuscles which have been found in health—lymphoid cells, ordinary colourless corpuscles, and rarely one or two large granular cells. Amœboid specimens of each were found, but the first and the last kind showed mere traces of movement. It was found that coagulation took place much more rapidly in the later than in the earlier specimens. The table shows that only a very small proportion of the corpuscles was amœboid, the highest found being 24 per cent., and the lowest 4 per cent. The proportion also decreased with the advance of the disease; the mean of the first six observations being about 12 per cent., while that of the last six only gives 6 per cent. As the first observations were made in a comparatively late stage of the disease (after the occurrence of hæmorrhage), further investigation must decide whether loss of amœboid movement takes place at the earliest onset; it is very probable, however, that this will be found to be the case. For purposes of comparison the blood was examined in two cases of chloro-anæmia, and one of anæmia with leucocytosis from cancer of the stomach, and in all three amœboid movements were active at ordinary temperature. The earliest observations on the point brought forward in this paper were made by Dr. Laking in 1873, but remained unpublished. The results were communicated by Dr. Pye-Smith to the Pathological Society in 1878, and in the same year to THE LANCET by the author of this paper. Neumann, also in 1878, found amœboid movements wanting, or very sluggish, in a case of leuchæmia, although they were active in the corpuscles of fluid from blisters in the same individual. The following conclusions may be drawn:—1. The colourless corpuscles in leuchæmia are dead or dying, and hence incapable of development. 2. Amœboid movement being practically lost, emigration from the blood-vessels is impossible. 3. Coagulation and thrombosis are largely favoured. Secondary leuchæmic nodules and infiltration must be produced, not by emigration, but by extravasation, and probably also by lymphatic accumulation, as large numbers of cells must be prevented from entering the blood by lymphatic thrombi. Whether lymphatic new growth also takes place must be decided by careful examination as to the presence of a true adenoid reticulum, and must be rejected if we find only a network of fibrin. In conclusion, it is pointed out that the absence of amœboid movement may prove of great value in diagnosis, as serving to distinguish cases of true leuchæmia from leucocytosis, a matter in which there are often grounds for hesitation.—Mr. SAVORY inquired whether the number of red blood-corpuscles was absolutely or relatively diminished, as if the leucocytes were inactive or dead this should affect the genesis of the red corpuscle.—Dr. SILVER said that in a case of lymphatic leuchæmia recently under his care the white corpuscles, which were of various sizes, exhibited unusually active movements at ordinary temperature. The same occurred in a case of splenic leuchæmia under Dr. Green's care. In both cases there was also a marked tendency of the red corpuscles to become fused into irregular masses, a change observed also recently by a Dublin physician in a case of essential anæmia. Of course it would not be right to draw conclusions from single cases.—Dr. PAYNE said that some years ago he made a post-mortem examination at St. Mary's Hospital on a man who died from exhaustion following a simple fracture of the femur. Around the fractured ends was a mass of soft imperfect coagulum; there was no true coagulum, no suppuration, no attempt at repair. It seemed to be a striking instance of want of "vitality" of the leucocytes, not permitting of the usual changes of repair.—Dr. CAVAFY, in reply, said that he had not studied the red corpuscles in this case, but had observed simply the amœboid movements of the leucocytes. The proportion of white to red corpuscles was 1 to 6. Dr. Silver's cases were interesting, and seemed opposed to his own observations, but they may have been in an earlier stage of the disease than in the case he had observed. Neumann had noticed the want of amœboid movements in the white corpuscles in leuchæmia, and Dr. Shann was at present observing a case at Addenbrooke's Hospital in which only a small proportion of leucocytes showed movements. Dr. Payne's observation tended to show that want of repair in the fracture was due to loss of vitality of the colourless corpuscles. The matter was open for further investigation.

A paper followed by Mr. B. E. BRODHURST, entitled "Observations on the Nature and Treatment of Genu Valgum." Genu valgum is regarded rather as a constitutional than as a local defect. It is accompanied by a relaxed condition of the ligamentous system, and it is preceded by flat foot. Thus the tibia is inclined outwards, and the weight of the body is thrown unduly to the inner side of the limb. The internal lateral ligament of the knee-joint consequently yields, and the inner condyle protrudes. The condyles of the femur are thus placed in an oblique position from without inwards, and from above downwards. There is usually a difference in the length of the condyles, the inner being about three-tenths of an inch longer than the outer. Sometimes, however, it is five-tenths of an inch, and again not more than one-tenth of an inch. This is observed both in the rickety and in the healthy femur. Examples are to be seen also where the difference in length between the inner and the outer condyle is almost inappreciable, and again other rare specimens exist where the inner condyle is fully one inch longer than the outer, and is misshapen. Knock-knee in its early stage disappears in the horizontal position, and can only be distinguished when the patient is erect, when, at length, it has become permanent, firm support is sufficient to remove it. But as the deformity increases and the femoral condyles become more oblique, the biceps femoris is rendered tense, the ilio-tibial band becomes tightly drawn, and the external lateral ligament is rigid. The question to be solved is, how is the limb to be restored so that a right line, passing, as in the normal condition, through the long axis of the femur and of the tibia, may strike on the top of the arch of the foot. In the first place it is necessary to remove the flat foot, or in other words, to restore the arch of the foot. Various modes have been adopted to restore the straight line of the limb; for example, forcible straightening, osteotomy, and tenotomy. 1. Forcible straightening has been employed both in young children and in adults. It is effected with considerable injury both to the bony structures and to the soft parts; but, according to M. Delore, permanent injury is not produced, and his patients are again able to walk in the course of six months. 2. Osteotomy has lately been performed by some surgeons in every case of genu valgum, even when the deformity was yet very slight, and the child only between three and four years of age. One operator claims to have performed osteotomy for genu valgum on nearly four hundred limbs. And it is not that one section alone is made, but perhaps three, or even four, are executed on the limb at a sitting. Notwithstanding these osteotomies on the condyle and on the shafts of the femur and the tibia, the deformity often remains almost as great as before the operation. And when the limb appears to have been straightened the deformity recurs, and the malleoli are seen several inches apart. Further, genu varum may be substituted for genu valgum. Also, partial anchylosis is not unfrequently induced, and the motion at the joint is much impeded. The growth of the limb also is interfered with, and a serious lameness is begotten where there was previously no lameness. Fatal blood-poisoning, also, has resulted more than once from these operations. 3. It is shown by a cast of a valgous knee which was taken when the patient was nearly eighteen years of age, that a very serious deformity existed, the inner malleolus being ten inches and a half removed from the median line. In this case the biceps tendon, the ilio-tibial band, and the external lateral ligament were divided, and the knee and the foot were brought, in the course of seven weeks, into their normal positions. When splints are insufficient to redress the limb, division of the tendon of the biceps femoris usually enables the limb to be straightened until adult-life is attained. But when in addition to the biceps the external lateral ligament and the ilio-tibial band are divided, the

knee may be straightened either immediately or gradually. In the adult gradual straightening is to be preferred. Any abnormal motion after division of the ligament is due to the lax condition of the internal lateral ligament, but this gradually lessens and at length ceases; unless the arch of the foot be raised and the retraction of the biceps be overcome, the inclination outwards of the tibia and the fibula must remain, notwithstanding osteotomy. In conclusion, it is stated that forcible straightening of the limb (*redressement brusque*) is unjustifiable; that osteotomy is wrong in principle and unnecessary, and that in children especially it is objectionable; but that division of tendons and fasciæ may be done without danger, and that through tenotomy we are able to reduce this deformity and to restore the thigh and the leg bones, and the bones of the arch of the foot to their normal positions.—The PRESIDENT said the paper contained several points of practical interest. He could confirm from his own experience the statement that genu valgum is often preceded by flat foot. As to osteotomy, there was no doubt as to evil consequences—even death—following an operation in which the knee-joint must be opened, and he hoped that surgeons who practised it would give their experience.—Mr. WARRINGTON HAWARD agreed as to the variations in the causes of genu valgum, many factors entering into its production. In some cases the ligaments, in others the bones, were at fault; and other cases were due to general debility. It was not, then, possible to lay down a special form of treatment to suit all cases. The examples of this affection might be divided into two sets—viz., those met with in young children, and those in subjects at or about the time of puberty. In young children rickets was a chief element in causation, the knock-knee being only one manifestation of the general condition. Such cases were to be treated constitutionally, the only local procedure necessary being to apply splints and to prevent the child bearing weight on its legs. On the other hand, the genu valgum that occurs in young growing ill-nourished girls and boys about the age of fifteen is mostly associated with flat foot and lateral curvature. There is little bony deformity, but laxity of ligaments and muscles. There are many cases in young rickety children with considerable knock-knee and but little flat foot, which could not be regarded as a factor in the production of the knee-deformity. In such cases there was marked elongation of the inner condyle, and it seemed reasonable to act on the condyle rather than on the tendon, which is not contracted. In such a case, of which he mentioned an example, it is impossible to forcibly straighten the limb. At the same time he had met with but few cases calling for osteotomy. In one case, which seemed most suitable for this operation, he was unable to perform it on account of the opposition of the parents, and after persevering by means of splints, a very satisfactory result was obtained. In another case of elongated condyle with lax ligaments following rheumatism, the limb was straightened after chiselling through the condyle; but the deformity returned as soon as the support was left off, owing to the laxity of the ligaments. There were cases, however, which were rightly treated by osteotomy; but he maintained it was incorrect to speak of this as an extra-articular operation. It was impossible, even on the exposed bones of a dead subject, to chisel off the condyle without opening the joint.—Mr. R. PARKER agreed that constitutional causes were largely at work in the production of genu valgum, and also laxity of ligaments; but there were other factors also. Flat foot was by no means often met with; when it occurs it follows rather than precedes the deformity produced by genu valgum. Mr. Brodhurst admitted there was lengthening of the inner condyle in a certain number of cases. Whether the lengthening be primary or secondary, it was not possible to straighten a limb with this condition unless very great violence were used; and Ogston's operation was directed to remedy this cause of the deformity. When the operation was carefully performed, the limb could be got quite straight; but of course, if care were not taken subsequently, it might relapse; and he attributed failure to the lack of continued supervision of these cases. He had never regretted operating for genu valgum in young children, who make good recoveries; and he did not regard osteotomy as more serious than tenotomy was in the early days of its introduction into surgery. He did not think osteotomy could be compared to the plan followed by Mr. Brodhurst, which answers in certain cases; and it was not correct to say that osteotomy was now done in all cases of genu valgum. Mr. Brodhurst's plan had been practised for a very long time; osteotomy was only recently introduced, and the great incentive to its performance was the insufficiency of the old method to cure the deformity.—Dr. E. HAUGHTON testified to the success attending Mr. Brodhurst's plan in a case in which it was adopted in preference to osteotomy, as being less free from danger. It was a bad case of genu valgum; and the limb was maintained in splints after the tenotomy, the splints being subsequently replaced by iron supports, which had now been removed.—Mr. BARKER said that no doubt some ill results had followed Ogston's operation, and some might have been unrecorded. But what had been the experience of the surgeon mentioned by Mr. Brodhurst, who had had three hundred of these cases? When looking up the subject after the fatal case which occurred in his own practice, he found records of one hundred and eighty cases, the only fatal ones being his own, and one dying from renal disease six weeks after the operation. A mortality of one per cent. could not be considered high even in minor operations. About a year ago he saw a case which had been treated by Mr. Brodhurst by tenotomy some eighteen or nineteen years previously. The patient was wholly unable to walk without a support, having worn a splint all the time, and much wished further measures to be taken; but owing to the laxity of the ligaments he was compelled to advise against osteotomy, and the patient was left unrelieved.—Mr. SAVORY concurred with Mr. Brodhurst in the opinion that osteotomy was being far too frequently performed. It was a "fashionable" operation, and every week case after case is recorded of "success" following it, so that one was tempted to ask what was meant by "success." If the patient escaped with life and limb, that was styled a brilliant success! Two things were to be considered, one was the use of the limb, the other its form or beauty. In a certain number of cases the latter was improved, but as to usefulness of limb (infinitely more important), those who record the successes give no definite information as to how far such people could walk *before* operating, and how far *after?* To the working classes it was of especial importance. He knew of one case, a postman, who could walk his ten miles a day before he was operated on, but since then he has never reached that. Surgeons who perform osteotomy to relieve this deformity should not record as a success the mere improvement in the shape of the limb, but should see that its utility was increased, and not diminished.—Mr. BARWELL said that in his experience flat foot was, as Mr. Parker had rightly said, secondary to knock-knee, and not a factor in its production. In many children the tibia becomes so curved from the genu valgum that the foot gets flat. There was undoubtedly, in many cases, very evident laxity of the ligaments, especially the external lateral. He believed the lengthening of the condyle was apparent and not real; it was due to obliquity of the epiphysis at its junction with the shaft of the femur, and he had produced the deformity artificially by driving in a wedge into the bone so as to produce obliquity. He had also found by experiment that with a femur fourteen inches long, and a tibia thirteen inches, and a deviation of eight inches, in order to remedy the deformity by adduction of the tibia it was necessary to separate the outer condyle an inch and a half from the tibia. During life this was done by Mr. Brodhurst by dividing the lateral ligament, the ilio-tibial band, and biceps tendon; and he did not see how this could add to the security of the limb. Mr. Brodhurst showed a case at the Clinical Society a year ago where this had been done, and the patient was unable to walk without support. For himself, he would much prefer to have his femur divided than the ligaments, especially if the knee-joint had to be torn asunder to get the limb straight. In reply to Mr. Savory, he could tell him of cases, and show him patients, in which the utility of the limb was greatly improved by the division of the femur. As an example, he quoted the case of a young lady, who before operation could not walk a hundred yards, but who afterwards was enabled to climb a mountain at Penmaenmawr, and who walks now five or six miles daily. (In reply to Mr. Savory, Mr. Barwell said this was certainly the case.)—Mr. BRODHURST, in reply, said he knew there would be difference of opinion on the subject. He agreed with Mr. Savory that osteotomy was overdone. He had seen several cases where it had failed, and he mentioned one. No doubt, occasionally genu valgum precedes flat foot; but the reverse is the rule—it is so in ninety-nine cases out of one hundred. The case shown at the Clinical Society was a girl of eighteen, and it was only six weeks after operation.

## MEDICAL SOCIETY OF LONDON.

*Tumour of Cerebellum.—Mitral Stenosis.—Reduplication of Cardiac Sounds.*

AT the meeting of this Society on the 8th inst., the President, Mr. F. J. Gant, in the chair—

Dr. DOWSE read notes of a case of Tumour of the Cerebellum. A man, thirty-four years of age, who contracted syphilis ten years ago, began to suffer from ptosis of the left eyelid at the end of last year, followed by failing vision, first of the left and then of the right eye; he had also diplopia. In July severe headaches set in, and his gait became staggering; and occasionally he suffered from stiff neck, with retraction of the head. There was atrophy of both optic discs, especially the left. There was partial deafness of both ears; but with the exception of numbness of the fingers, sensation was normal. Memory was defective. On standing or walking there was weakness in the lower limbs with defective volitional co-ordination. There was complete absence of patellar-reflex. There was probably then a growth (possibly syphilitic) in the middle lobe of the cerebellum. The absence of tendon-reflex did not necessarily point to spinal disease, but it might be due to an inhibitory power exerted in the cord, preventing reflex action.—Dr. DAY doubted whether there was sufficient evidence of its syphilitic nature; and pointed out the difficulty in diagnosis between the headache of cerebral congestion and that of nervous exhaustion. He mentioned a case of cerebellar tumour where there was no headache.—Dr. GILBART SMITH said there was in the London Hospital at present a patient suffering from cerebellar tumour, in whom there was marked reeling gait, slurred speech, impaired memory, and double optic neuritis, although vomiting, headache, stiff neck, pain on pressure, and paralysis were absent. Patellar-reflex was exaggerated.

Dr. SANSOM narrated a case and exhibited a specimen illustrating a mode of Causation of the Murmur of Mitral Stenosis. The patient manifested a systolic murmur with maximum at the base; at the apex a short murmur was interpolated between the second sound and the first sound, a pause preceding and succeeding it. This was found at the autopsy to be due to "buttonhole" constriction of the mitral valve with extreme dilatation of the auricle. It was obvious that the murmur heard during diastole was due to the flow through the mitral orifice unaided by the auricle. The rhythm of the murmur following the second sound exactly resembled that of reduplication of the latter.

Dr. SANSOM also read a paper on the causes and significance of Reduplication of the Sounds of the Heart. He first reviewed the various theories adduced in explanation of doubling of the first sound. These might be reduced to two. 1. That reduplications of the first sound are *real*, and are due to a want of synchronism in the systolic tension of the auriculo-ventricular valves of the right and left sides. 2. That they are apparent and due to an auricular immediately preceding the ventricular systole. He could not agree that the auricular systole is directly audible, but that it might cause a sound by communicating a presystolic tension to the mitral curtains under certain conditions. He adduced cardiographic tracings to prove that in certain cases of apparently reduplicated first sound the auricular systole was greatly augmented, and showed that the phenomenon might be the precurser of an undoubted presystolic murmur. As regards reduplication of the second sound, he had observed it in eleven out of thirty-seven cases of mitral stenosis. All observers are agreed that mitral constriction was the most common condition in which it was observed. He considered, from a review of the cases, that the reduplication of the second sound was often *apparent* and due to a tension communicated to the mitral curtains *early* in diastole, just as in quasi-reduplication of the first sound it was communicated *later* in diastole. The moment the ventricle becomes relaxed after its systole the blood retained in a state of tension (the pressure in the pulmonary circuit being heightened) in the auricle enters with force into the ventricle, and finding its way on the parietal side of the curtains of the mitral valve, causes them to bulge towards the ventricular cavity, and in so doing occasions the "click" of valve-tension, which, coming so soon after the second sound, closely resembles a reduplication of the latter. Although a frequent it is not a universal explanation of this reduplication. In some cases it is very probable that the reduplication is real and due to non-simultaneous closure of the semilunar valves of the aorta and pulmonary artery. He agreed with Dr. James Barr of Liverpool, who held that over-repletion of either of the ventricles was the cause not of delayed but of anticipated sound.—Dr. GALABIN argued that reduplication was often rather apparent than real, cardiac murmurs closely approximating cardiac sounds, especially in the case of direct mitral murmur. Thus in mitral stenosis, the presystolic might be mistaken for a loud first sound and the true first sound for the second sound of the heart. He could not understand how valvular tension could occur when the valve was converted into an indurated ring. The apparent second element of a reduplicated second sound might be due to a short diastolic murmur of direct mitral character; and reduplication of the first sound apart from cardiac disease, due to the sudden tension of the ventricle after the closure of the valve.—Dr. MAHOMED believed that reduplications of the sounds were chiefly valvular in origin, although in mitral stenosis other sounds are often mistaken for reduplication of the normal cardiac sounds. He exemplified the cause of reduplication of the second sound by the recoil of two equal pieces of elastic, the one stretched to four inches, and recoiling to three inches; the other stretched to three inches, and recoiling to two inches; if stretched simultaneously they would not complete their inch of recoil simultaneously. He thus attributed the reduplication of the second sound to the asynchronous recoil of the aorta and pulmonary artery subject to abnormal variations in pressure in either one or the other. This explained the frequency of this reduplication in mitral stenosis when the pulmonary pressure was heightened. He similarly explained reduplication of the first sound, and he believed these views were identical with those advocated by the late Dr. Sibson. He did not think deduction could be drawn from cardiographic tracings, which did not signify the time of closure of the valves.—Dr. JAMES BARR (of Liverpool), in the course of his remarks, stated his belief that reduplication was due to asynchronous action of the ventricles, so that a normal doubling of the first sound occurs at the end of expiration from the increased stimulus to the right ventricle, and of the second sound at the end of inspiration from the early cessation of the right ventricular systole. In disease that ventricle which is best supplied with blood initiates the systole, although it may not complete its contraction until after the other ventricle has finished its systole; or both ventricles may begin systole together, but one may lag behind the other. He was certain there was this asynchronous contraction of ventricles (and of auricles also), each side of the heart having its own fibres.—Dr. SANSOM replied, and the Society adjourned.

## OBSTETRICAL SOCIETY OF LONDON.

*Congenital Dislocation of both Hips.—Rotatory Action of the Forceps.*

AT the meeting on Oct. 6th, Dr. W. S. Playfair, President, in the chair—

Dr. POOLE related a case of so-called Congenital Dislocation of both Hips, and showed a little girl, aged four, with the following history:—The mother was suffering from alarming hæmorrhage, due to placenta prævia. Version was performed; the right leg brought down. The foot was fastened to a tooth-brush, and remained thus about five hours, when pains came on vigorously, and the child was delivered with ease. He did not remember whether any traction was applied to the leg. No abnormality was noticed until the child began to walk, when it was observed to limp, and the right leg was found to be in fault. The measurement from the anterior superior spine to the knee was half an inch longer than on the left side. There was considerable lordosis, with projection of the abdomen, and there was a space between the thighs in the standing position. The child had been taken to Mr. Adams, who pronounced both acetabula to be defective.—Mr. W. ADAMS said that it was a well-marked case of the so-called congenital dislocation of the hip, which, he thought, would be more accurately described as malformation of the acetabulum, with displace-

ment of the head of the femur. In this case both hips were similarly affected, and the lordosis, prominence of abdomen, large size and prominence of nates, shortness of legs as compared with trunk, and wide separation of the thighs, were characteristic. The top of the great trochanter, on each side, in the standing position, rose above the level of a horizontal line drawn from the anterior superior spine; but when the child was lying down, and a little gradual traction made from the knee, the great trochanter descended fully as low as its normal position—i.e., about an inch and a half below the level of the spine. This was demonstrated to the Society. As to causation, it had been asserted that this condition never exists except in cases of breech presentation, and is due to traction on the leg producing dislocation. In his experience of a large number of these cases, the presentation had generally been natural, and the labours easy. He believed the affection to be essentially a malformation, consisting in arrested development of the acetabulum. The production of pelvic deformity by this condition was proved by Dr. Carrochan of New York, who first called attention to the affection in 1844, and demonstrated it of a patient, of whom a life-sized model was now in the museum of St. Thomas's Hospital.—Dr. WYNN WILLIAMS concluded, from the history of the case and examination of the patient, that the ligamentum teres on both sides had been ruptured during delivery, and that the head of the bone was then drawn up against the edge of the acetabulum by muscular action.—Dr. GRAILY HEWITT thought it very desirable to ascertain whether, in the numerous cases referred to by Mr. Adams, any history could be traced of manipulating traction on the lower extremities during the labour, with a view to determine whether this had a tendency to cause such a condition.—Dr. CLEVELAND mentioned a case of a little boy malformed in this way, who had been brought over to him from Quebec, wearing an instrument for supposed spinal disease. The true nature of the case had been pointed out by Mr. Adams.—Dr. GERVIS asked Mr. Adams if spinal lordosis always accompanied these cases. If he had ever examined any after death; and if he had any experience of congenital dislocations of other articulations.—Dr. HERMAN had seen a case presumed to be one of congenital dislocation of the hip in a woman aged thirty. On the affected side the curve of the iliac crest was much flatter than on the sound side. He thought this due to the head of the femur being further back, so that it acted at less advantage in pressing inwards the anterior part of the innominate bone.

Professor STEPHENSON, of Aberdeen, read a paper "On the Rotatory Action of the Forceps." The author considered that recent modifications in forceps showed that the inventive faculty still moved in the grooves of the older and more imperfect ideas. The sole idea was how may we, with the head tight in the grip of the blades, draw with greater accuracy in a given straight line. What really is wanted is an improved form of the instrument, which will enable us to impart more readily the rotatory movements which we observe in nature. The division of the traction from the prehensile blades weakens the transmission of information by the handles to the hand of the operator; in his muscular and tactile sense should reside the true "indicating needle." The claim made for Tarnier's forceps, that they allow free movement of the head in all directions, is no more true than applies to the ordinary instrument if the operator attends to the directions which they supply. The opponents of the pendulum movement with forceps occupy good ground when they show it is contrary to the normal mechanism, and a fortuitous and risky mode of action; but they go too far when they include in their condemnation all so-called lever action. The true defence of the lever action is to throw out all that is haphazard, and give it scientific precision. The term "lever action" is objectionable; "rotatory action" is preferable. The forces of labour cannot be reduced to a single resultant, but always consist of a resultant and a couple, the former moving the head onwards, the latter imparting some movement of rotation. With forceps we have the power of producing both movements; and, as in nature they are always combined, so in art they should never be entirely separated. Hence with the onward traction made in the axis of the pelvis must always be combined such a movement of the instrument as will tend to impart to the head the rotatory movement which observation teaches us takes place at the particular stage of the mechanism.—1. *Flexion and extension.* With the head in the firm grasp of the forceps, especially if screwed up, there is a tendency to bring down both ends of the head through an equal space, and so prevent due flexion from taking place. But, on the other hand, if the blades are applied with a diagonal grasp, the compressing power of the forceps may be made to promote flexion. But flexion or extension must chiefly be promoted by a modification of the rule of traction, which might be thus stated. Whilst the force should always be exerted with strict reference to the direction of the axis of the pelvis, the line of traction should be in a slightly curved direction; the curve passing out of the line of the axis in a direction corresponding to that of the sagittal suture, towards the side where the forehead lies, for flexion; to the side on which the occiput is, for extension. 2. The rotation of the occiput forwards might also be promoted by rotating the forceps on their axis, and bringing the handles slightly toward the side on which the occiput lies. The grasp must be light, so as to permit gliding between the blades. 3. As the head passes under the pubic arch the rule should be that whilst carrying the handles forward toward the front of the mother, a carefully applied slight rotatory action should be imparted to the forceps, so as to facilitate the change of the sagittal suture from lying oblique to approach near to that of the mesial line.—*Rotations in Narrowed Pelves.* The application of forceps tends to rotate the head from a transverse to an oblique diameter, and the frontal bone is liable to be thereby thrown on to the promontory. Hence the following rule:—When the occipital bone has descended below the level of the brim and is felt directed against the anterior wall of the pelvis, in order to clear the forehead and prevent injury to the frontal bone, the head should be rotated on a vertical axis, so as to throw the frontal bone off the promontory, and at the same time slight extension should be given to the head, to bring the forepart down to the side of the pelvis. The paper was illustrated with diagrams, which were explained by the author.—Remarks were made by the President, Dr. Roper, Dr. Edis, and Dr. Braxton Hicks.—In reply, Professor STEPHENSON said, in reference to an objection by Dr. Roper, that he doubted whether the head could rotate on a vertical axis when impacted in the brim, that all depended upon the meaning attached to the word impacted. Generally the head, though wedged in the narrow pelvis, was still movable on certain axes. Regarding occipital posterior positions, he agreed with the President and other speakers that the occiput rarely rotated forward with the ordinary mode of using the forceps. But it was possible to rotate it, and it was our duty to endeavour to do so. The "tentative" mode of employing the forceps referred to by Dr. Hicks was good, but we should not be content with it, for it might lead astray. We should endeavour to impart the rotatory movements with the precision obtained by exact knowledge.

## EPIDEMIOLOGICAL SOCIETY.

THE first meeting of the present session of this Society was held on November 3rd, 1880, at University College, Gower-street, when the proceedings were opened by the President, Sir Joseph Fayrer, who delivered the inaugural address, of which the following is an abstract.

After congratulating the members of the Society on its marked prosperity, Sir JOSEPH FAYRER made a touching allusion to the losses sustained by the deaths of Dr. E. C. Seaton, Mr. Harry Leach, and Dr. Goodeve. Referring to the important work carried on by the Society during the last session, Sir Joseph Fayrer noticed especially a series of papers on Indian Fevers, and the discussion which followed them, and he expressed the hope that they might have the effect of drawing attention to the question, especially to the etiology of those forms of fever which, while presenting the phenomena of enteric fever, are considered by some to be due to general rather than to specific causes.

The subject of plague had been amply dealt with by three papers. The first was by Dr. Payne, one of the Commissioners appointed by the Government in 1879 to investigate the plague which had been prevailing on the banks of the Volga, in the province of Astrakhan, in 1878–79. This communication threw much light on the geographical distribution, history, progress, and diffusion of the disease, and on the measures taken by the Russian Government for its sup-

pression. The Commissioners considered that there was no evidence to support the theory that plague was introduced by Cossacks returning from the war in Asia, or that it was directly transferred from Resht or elsewhere on the Caspian Sea to Vetlianka, but that everything pointed to the conclusion that the disease had already gained a footing in the district (whether introduced from outside or springing up spontaneously in its soil) before the outbreak at Vetlianka. Dr. Payne remarks with regard to the possible "spontaneous origin," it appears that the same reasons which will hold to show that plague is endemic or springs up without being introduced from elsewhere, in other parts of the world, seem to apply here; actual proof of such an origin would be almost in any case unattainable, but the difficulties which beset all theories accounting for its introduction into the district certainly argue strongly in favour of such a view. With regard to the nature of the epidemic, its character and its morbid anatomy, the wide spread of the disease, with special reference to personal communication and the influence of local causes and contagion, the Commissioners had no opportunity of forming any opinion, as the disease had died out before their arrival. The information they obtained from those examined on the spot is all they had on which to form conclusions on these subjects.

An interesting summary of the German Medical Commissioner's Report was read by Mr. L. Hamilton. Dr. A. Hirsch of Berlin, whose account of the plague in Astrakhan differs from that of Drs. Payne and Colvill, describes it as a malignant, contagious disease, with all the character of Oriental plague, sometimes with buboes, sometimes without them. He attributes the outbreak to the importation of infected articles from the Asiatic seat of the Russo-Turkish war, and believes that it was not imported from Resht; neither is it indigenous to Astrakhan, where it had not appeared since 1808. Owing to faulty reports, the Russian Government did not avail itself of preventive measures until the plague had attained its maximum intensity, and was already approaching its natural termination. The report showed that considerable difference of opinion exists on the subject of the etiology and mode of propagation of the disease.

An interesting communication on Plague in India was made by Surgeon-General Dr. Francis. He pointed out its geographical distribution in Kumaon and Gurwhal, where it is known as Mahamurree, and he described the habits of the people of those districts. It has been characterised by glandular swellings, hæmorrhages, and rapid death; it is endemic, bubonic plague, caused by an animal poison which is generated by the operation of local conditions, is in no way modified by malaria, and is intensely contagious amongst the people themselves, although those who visit that country do not appear to suffer from it. The Pali plague, a disease having much the same character, appears to be closely allied to the mahamurree. Dr. Francis believed that this disease is largely due to local insanitary conditions.

Dr. Longstaffe read a paper on the Relationship existing between certain of the Zymotic Diseases, in which he argued that they should be classified under four headings—viz., the diarrhœal group, relating to the heat of summer; the bronchitic, to the cold of winter; the scarlatinal group, and a provisional group, comprising all the other causes of death not known to be much influenced by meteorological conditions. One object of the paper was to suggest the probability that the poisons of erysipelas and puerperal fever were identical, while diphtheria and croup were also due but to one poison.

Cholera had not attracted so much attention as in former sessions, but a paper had been contributed by the late President, Dr. Murray, on this subject, showing, by an elaborate series of tables, the value of removal of troops or prisoners to other localities on the breaking out of cholera, and that the objections which had been urged against this operation on the score of expense, and the risks arising from exposure to sunstroke, had but little foundation.

The epidemic diseases of men and animals in the colony of Natal were brought under the notice of the Society by Surgeon-General Ross, C.I.E., who had recently acted as Chief Commissioner of the Stafford House Committee for the relief of the sick and wounded in the Zulu war. Mr. Ross stated that, although the climate had been proved, as a rule, healthy for human beings, it had been found most unfavourable to cattle. The disease affecting the troops in Ekowe was called typho-malarial fever, with rose-coloured spots, and affection of Peyer's glands. The diseases affecting the lower animals were diarrhœa, pleuro-pneumonia, hæmo-albuminuria, and one allied to anthrax.

The subject that has most engaged the attention of the Society has been that of certain forms of fever in India and tropical and sub-tropical climates, and several important communications on this subject had been made by men of large and varied experience. Papers by Dr. Chevers on Relapsing Fever, by Dr. Ewart on Enteric Fever, by Dr. Don on the Continued Fevers of Sub-tropical Climates, and by Dr. C. Gordon, C.B., on the Continued Fevers of India, have plainly shown that the subject still needs much investigation. The chief interest of the proceedings of the year may be said to have centred in the discussion arising out of the communications on enteric fever. It is only recently that this disease has been recognised as a cause of mortality in India, and now it appears from official reports that the death-rate from this disease among our young European soldiers is very high; the question, therefore, that has been so earnestly discussed is this: Are all the cases returned as enteric fever in which the symptoms and the post-mortem appearances are similar to those of enteric fever in this country due to the same causes? That is, are they the result of a specific poison generated in the intestines or its contents of one person and conveyed to another through the intervention of air, water, or some other medium; or are they not, in some cases, referable to what are known as climatic influences, by which is meant heat, moisture, malaria, miasmata, or to water in which these are dissolved or suspended with, perchance, the addition of other causes—aerial, telluric—of which we know nothing positively, but of whose existence as dynamic agencies we probably have indications in other epidemic diseases? As to the existence of a form of fever in India characterised by certain phenomena and pathological changes very closely if not exactly resembling those that characterise the enteric fever of Stewart, Budd, Jenner, and Murchison, there is a pretty general concensus of opinion. But on the question of causation there can be no doubt that a considerable divergence of opinion exists. It is a growing belief that the cause of some of the cases of the so-called enteric fever is to be sought in high temperature, malaria, miasmata, water contaminated by organic matter, not necessarily fæcal, rather than in a specific poison generated in the intestines or in the alvine discharges after extrusion from the bowel; and perhaps in some state of body, especially in the young, that is induced by exposure to one or all of these. It cannot be disputed that the poison of the enteric contagion must be equally effective in producing fever wherever it occurs, and certainly not less so in India or the tropics than elsewhere. Few question its potency in England, though it is possible that twenty years hence, even here, this view may be somewhat modified. Some believe that the specific contagion theory will not explain the facts in all cases abroad; nor do they think that a certain train of symptoms and phenomena during life, and lesions observed after death, must necessarily be invariably due to *one* single cause, but rather that the bowel ulceration, diarrhœa, spots, and a certain range of febrile disturbance in the temperature, may be brought about also by other conditions such as those already referred to, and which make up what is known as climatic influence. It is difficult to resist the impression, whilst admitting enteric fever in India may originate as it does here, that other causes may be at work, and that cases of fever, which in India are not only called enteric, but present the phenomena in life and the changes after death that are characteristic of the disease in England, do occur, and not unfrequently, where it is more probable that climatic and other local conditions are the cause rather than fæcal contagion, though it must be admitted that it is not possible to deny the possibility of fæcal contagion where human beings have been.

The address was followed by a paper by Mr. NETTEN RADCLIFFE, who briefly described the outbreaks of cholera in Syria in 1875, Western Arabia in 1877–78, and Morocco in 1878, with a view of throwing additional light upon the origin of the two former outbreaks, and of questioning the nature of the latter outbreak. With respect to the Syrian and Western Arabia outbreaks, he endeavoured to show that it was premature to assume, as had been commonly assumed, that they had originated in the districts where they had occurred; and with regard to the Morocco outbreak, he adduced important evidence which tended to show that the disease which proved so fatal in Morocco in 1878 was not true cholera, but a choleraic affection, or rather a form of malignant dysentery, caused by the improper food which was

had recourse to by the population to assuage the pangs of hunger during the terrible famine from which the country suffered at the time.

## OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

*Optic Neuritis.—Nodular Growth on Iris.—Primary Intra-ocular Hæmorrhage.*

THE first ordinary meeting of this newly-constituted Society was held on October 28th, at the rooms of the Medical Society, Chandos-street, W. Bowman, Esq., F.R.S., president, in the chair. The bye-laws of the Society were read and passed; and on the motion of the president it was agreed that a committee should be formed for the purpose of communicating with the Board of Trade, with a view to remedying the possibilities of accident in the public services attributable to colour-blindness.

Dr. GOWERS exhibited two cases of Optic Neuritis. One, a girl, had been attacked by uncontrollable vomiting, succeeded by optic neuritis and paralysis of both sixth nerves. Under treatment, the neuritis had almost, and the paralysis quite disappeared. Dr. Gowers suggested local meningitis as the cause of the symptoms. The second case was that of a woman aged twenty-three, with vertical headache and a halting gait. At first the case was regarded as one of hysteria, but the vision began to fail, and double optic neuritis developed; and there was inability to move the eyeballs upwards. After eighteen months of treatment the neuritis subsided, but other symptoms remained. Dr. Gowers thought there was a lesion in the centre controlling the upward movement of the eyeballs, and suggested that the case was one of cerebellar tumour.—Dr. HUGHLINGS JACKSON pointed out how easily such cases were confounded with hysteria, and thought the diagnosis rested between meningitis and tumour.—Dr. STEPHEN MACKENZIE was inclined to believe the case one of tumour in the region of the superior vermiform process of the cerebellum, stimulation of which had been shown by Ferrier to produce upward movement of the eyeball.—Dr. SHARKEY related a case at first taken for hysteria, where there was slight double optic neuritis, and where, after death, meningitis and cheesy tubercle in the brain and cerebellum were found.

Mr. NETTLESHIP showed a case of Nodular Growth on the Iris, following double iritis four months before. The iritis persisted on the left side, where a small yellow vascular nodule had grown. He believed it was not malignant, but felt doubtful whether an attempt should be made to excise the growth, or whether it would be better to remove the eye.—Mr. LYELL asked if there was any tubercular history. He had met with a similar growth in one eye. The patient was treated for iritis, but the growth continuing, its removal was attempted. This failed, owing to the softness of the growth, and ultimately the eyeball was excised. He thought such growths might be dealt with in their earlier stages.

A paper was read by Mr. HUTCHINSON on a case of Primary Intra-ocular Hæmorrhage, first into one eye, and subsequently into the other, with general remarks on the causes of the occurrence. The patient was a young man, who at the age of twenty-one lost his left eye by acute glaucoma, secondary to hæmorrhage into the vitreous, ciliary processes, and retina. Two years later the other eye became subject to sudden copious hæmorrhages into the vitreous, without pain or glaucomatous symptoms, the blood being quickly absorbed between each attack, but leaving finally opacity of the vitreous humour. There was no albuminuria. He was dyspeptic, habitually constipated, liable to rapid variations in local circulation, flushing, pallor, and cold feet. He was subject to epistaxis. The temporal arteries were large and tortuous, and Dr. Mahomed found his arterial tension too low. There was a strong family history of gout. Reference was made to a recent paper on the same form of disease by Mr. Eales of Birmingham. Mr. Hutchinson considered that inheritance of the diathesis took a very important share in the causation of the disease, but he did not try to explain the mode in which it operated,—whether by changes in the blood or the vascular walls, by increased arterial tension, or cardiac hypertrophy. The intra-ocular bleeding was considered as only one manifestation of a tendency to spontaneous hæmorrhage from various parts, in which a liability to inequality of circulation is the first factor, various temporary influences acting as exciting causes. Often the male sex and the period of adolescence were among the most important; over-fatigue, indigestion, constipation, position of the head in sleep, and other influences, also took more or less share. Reference was made to some similar cases communicated to the author by Mr. Square of Plymouth.—Dr. HUGHLINGS JACKSON referred to the not unfrequent occurrence of slight ocular hæmorrhage in cases of Bright's disease and epistaxis. In one case of meningeal hæmorrhage in a young man the subject of epistaxis, a distinct clot of blood was discovered in one eye.—Mr. H. EALES (Birmingham) had been unable to obtain satisfactory evidence of gout in the cases related in his paper. In all his cases there was an unusual fulness of both veins and arteries in the other eye, and in one such supposed healthy eye he detected hæmorrhagic spots at the extreme periphery of the retina. One of his patients, since the publication of the case, had suffered from a severe attack of hæmorrhage. In another relapse of constipation had been followed by bleeding in the eye preceded by epistaxis, which had not been previously experienced for twelve months. Mr. Eales suggested that constipation might be due to deficiency of blood in the intestinal vessels, thus leading to over-distension in the systemic vessels, the veins particularly. In no case did he find the pulse over 60, and the second cardiac sound was invariably accentuated from high arterial tension.—Mr. HIGGENS asked why the hæmorrhage occurred in the eye rather than in the ear or elsewhere. In unsound glaucomatous eyes the sudden reduction of tension in the operation of iridectomy was a sufficient explanation of the intra-ocular hæmorrhage, which not unfrequently occurred, but in the cases under consideration there was no increased eye tension.—Dr. BRAILEY had found many instances of glaucoma in which the walls of the arteries of the eye were diseased. Dr. BROADBENT thought high arterial tension a sufficient cause for such effects. He had often met with cases of youths affected with headache, incapacity for work, and commonly with epistaxis; but he had not found retinal hæmorrhage in such cases, nor any gouty history. The relation between the cases read and constipation was to be explained by high arterial tension, and he advocated purging as a rational procedure.—Mr. BRUDENELL CARTER questioned the advisability of referring such cases to a "gouty" diathesis.—Mr. HENRY POWER referred to the occurrence of similar hæmorrhages in pregnant women as a proof of the cause being alteration in vascular tension.—Mr. HUTCHINSON, in reply, said that he was surprised at the evidence of low tension in his case, but suggested that the tension might not be the same in all parts of the body. He argued that varying degrees of tension in the eyeball might influence hæmorrhage into it. "Gout" was a term indicative of an understood and distinctive disease, and in the case read there was ample reason for assuming a gouty tendency.

The Society then adjourned.

## Reviews and Notices of Books.

*Atlas of Histology.* By E. KLEIN, F.R.S., and E. NOBLE SMITH. Part 12. London: Smith, Elder, & Co. 1880.

THIS part, which is unusually large, opens with an account of the structure of the skin, and a particular description is given of the stratum Malpighii, and especially of the nuclei of the cells of this layer. It is shown that in the deeper cells the nucleus consists of a honeycombed reticulum without any nucleolus or limiting membrane; that in others the fibrils of the nucleus become arranged as a rosette; then they change into a star, when they receive the name of *monaster*, and later on into a double star, or *dyaster*. The cell then divides through a line separating the two asters. Each daughter star changes into a convolution, and this again forms a well-defined nucleus. The superficial layers of the stratum Malpighii are differentiated, and described as the stratum of granular cells of Langerhans, or stratum granulosum of Unna. This layer colours a deep purplish blue with hæmatoxylin. The granules are more or less discoid in form, and therefore appear rodlike in the profile view, and are a transition form between protoplasm and

keratin. The stratum Malpighii is firmly adherent to the surface of the corium by an albuminous cement, into which the branched lymph spaces and the connective-tissue corpuscles penetrate. The authors then give in succession the structure of the papillæ and the sweat-glands. It is stated that the human anus is surrounded by an elliptical zone presenting a number of large coiled gland-tubes, the circum-anal glands of A. Gay. Each of these, on minute examination, proves to be a huge sweat-gland. A very full account of the different structures of the hair-follicles, hair and sebaceous glands, succeeds. Each hair-follicle consists of the vascular hair-sac, the papilla, and the outer root sheath. The hair-sac is composed of an outer longitudinal and an inner transverse coat, and is continuous with the papillary layer of the corium and with the connective tissue of the septa which penetrate between the lobules of the adipose tissue. The inner surface of the transverse layer is lined with relatively short and broad unstriped muscle-cells. The hair-sac and papilla are separated from the next following or inner layer of the hair-follicle by a glassy hyaline basement membrane, which is a direct continuation of the basement membrane of the corium. It is divided from the outer layer of the outer root sheath. The outer root sheath is continuous with the stratum Malpighii of the epidermis. The root of the hair consists of the substance of the hair, the cuticle, and the hair sheath, or the inner root sheath. The central cells at the apex of the bulb become the axial cells of the hair, and those more laterally placed become the elongated cells of the cortex of the hair, or the cuticle of the hair. The next outer layer of polyhedral cells of the bulb is continuous with the membrane separating the cuticle of the hair from Huxley's layer. The one or two layers of cells next following pass into the layer of Huxley, and finally the outermost layer or two pass into the layer of Henle. All these parts are very clearly delineated both in transverse and in longitudinal sections in Plates xli. and xlii. The remainder of the section is occupied with a description of the sebaceous glands, the nails, and the lymphatics of the skin. Chapter 34 is devoted to the consideration of the eyelids, the conjunctiva, and the lacrymal glands; Chapter 35 to the cornea and sclerotic; Chapter 36 to the iris, ciliary processes, and choroid; Chapter 37 to the lens and vitreous body, and Chapter 38 to the retina. Plates xliii. and xliv. contain the drawings illustrating the microscopic anatomy of these parts.

The description of the retina does not add materially to what is already known, but rather consists of a carefully-made compilation of all recent work; even in this way, however, it will prove very serviceable to workers with the microscope.

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*Malaria: its Cause and its Effects.* By E. G. RUSSELL, M.B., B.Sc. Lond.; Surgeon, Bengal Medical Service; Civil Surgeon, Kamrup, Assam. London and Calcutta: W. Thacker, Spink, and Co. 1880.

ENGLISH practitioners can no longer afford to disregard the study of tropical diseases, especially those of a chronic nature. Our colonial possessions within the tropics are now so enormous, and the means of transit from them so rapid (shortened as it has been by the opening of the Suez Canal), that the number of persons invaliding home is annually on the increase. Thus cases of malaria and its sequelæ, enlarged liver and spleen, and chronic dysentery, are much more frequently brought under the notice of the English physician than was the case thirty or forty years ago, when the tedious voyage round the Cape either killed or benefited the invalid. At the same time, tropical diseases remain a *terra incognita* to most of us. In the present volume Dr. Russell discusses most exhaustively the subject of malaria and its effects, and the work should be read by all who are liable to be called upon to treat the conditions to which it gives rise. The chapter which describes the malarial lesions of the stomach and liver will perhaps be read with the most interest by the English practitioner. Dr. Russell offers a useful hint not to mistake the severe dyspepsia and gastric irritability associated with pale diarrhœa arising from too constant and prolonged a residence in malarious regions for hepatic disease induced by "free living"—a caution the more needed since, we fear, all dyspeptic troubles occurring in old Indians are apt to be regarded as due "to liver" provoked by unlimited brandy pawnee, hot curries, and tropical suns.

Dr. Russell ably discusses the relationship between ague and typhoid—a question that has been raised by Sir Joseph Fayrer. Dr. Russell observes that the pyrexia of true non-malarial typhoid often so closely resembles that of true malarial remittents that in India the diagnosis between these two diseases is frequently extremely difficult, and must be decided almost entirely by other distinctions than types of pyrexia. Indeed, so great frequently is the difficulty of accurately distinguishing the one disease from the other, that there are still physicians who consider there are sufficient grounds for denying the existence or occurrence of typhoid in India. Dr. Russell believes there frequently occur epidemics in which the fever partakes both of the nature of typhoid and true malarial intermittent and remittent fever. He supports the view of the existence of a typho-malarial fever by quotations from numerous authorities, but omits the weight given to it by Lancisci, who observed that on opening the bodies of certain patients who had died of semi-tertiary fever lesions were found in the intestines which had perforated all the coats. The second part of the volume is devoted to an analysis of fifty cases of injury of the spleen. These injuries from the frequency of their occurrence, and the importance of their medico-legal bearings, are of peculiar interest to the medical practitioner in India, but their consideration need not detain us at present. We therefore leave Dr. Russell's volume, commending it to the notice of our readers as a book full of facts and of clinical research, and which must be considered as an authority on the subject of Malaria.

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*Practical Histology and Pathology.* By HENEAGE GIBBES, M.B. H. K. Lewis, 136, Gower-street, W.C. 1880.

THIS is a small book written by a practical man, evidently well acquainted with his subject, and will be found of real service to those who wish to learn how to prepare good preparations for microscopical examination. The appliances required—microscope, knives, reagents, &c.—are first briefly described, and then the manner of obtaining all the tissues necessary for a thorough examination of the structures found in the human body, with directions for hardening them, are given. The chapter on staining is in some respects the most valuable, for Dr. Gibbes has made this subject a special study, and has obtained new and excellent results from using two and even three dyes at once; the methods by which others may be as successful are here plainly given. Two chapters are devoted to special directions for demonstrating the individual histological and pathological structures. The book is small, the directions concise and clear, but we believe the student will find in it all the help he can hope to derive from such a source, in a study where successful results can only be obtained by patience and perseverance.

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*The Physician's and Surgeon's Visiting List, Diary, Almanack, and Book of Engagements for 1881.*

THIS well-known "List" needs no praise. It is very compact and neat, and the various tables bound up with it make it most useful to the practitioner. Two of these call for special notice—one giving the days of incubation, &c., of the various fevers; the other, the corresponding degrees on the thermometric scales of different thermometers.

# New Inventions.

## NEW CARBOLIC HAND SPRAY-PRODUCER.

THIS is a modification of Lister's hand spray, suggested by Mr. Golding Bird. The size of the bottle usually supplied with the apparatus is often insufficient, whilst the holding of a larger bottle in the hand during a long operation is obviously inconvenient, especially if hot water be employed. These objections are overcome by supplying a bottle of four or more ounces' capacity (from which proceeds a specially-constructed flexible tube nearly a yard long and terminated by the spray-nozzle) carried at the side in a leather pocket by means of a strap slung across the shoulder.

In this way boiling water may be used, and the temperature may be thereby kept up for a considerable length of time, so that the spray resembles that from the steam spray. The simple apparatus is portable, and will be found especially serviceable in operations of short duration, dressings, and all cases where the steam spray is inconvenient or not available. The long flexible tube allows of the spray being turned in any direction, and the bellows can be readily changed from hand to hand, thereby avoiding fatigue. The apparatus is made by Millikin and Down, 3, St. Thomas's-street, London, S.E.

## THE "CROWN JEWEL" STOVE.

Now that the question of London smoke is so much to the fore, every contrivance for affording heat without smoke is sure to command attention, and we have great pleasure in giving a short space to a description of a stove for burning anthracite or coke, made at the Detroit Stove Works, U.S.A., and on sale in London at the house of the agent, Mr. Harry Hunt, 117, Newington-green-road, N. It is intended for the heating of halls, passages, and public buildings. The form of the stove is rather elegant than otherwise, and it has the great advantage of allowing the fire to be visible through talc windows, so that it is thoroughly cheerful and pleasant to look at. It requires very little attention, needing only to be filled up with anthracite about twice in the twenty-four hours, so that, in America, a stove lighted at the beginning of winter is never allowed to go out; and the risk of its going out is lessened by the fact that the fire can be seen as well as felt. By means of dampers the rate of combustion and the amount of heat given off can be regulated to a nicety. There is no smoke, and consequently the flues never need cleaning; there is no escape of fumes when fuel has to be supplied; and by the consumption of 37 lb. of anthracite (value 4*d*.) per diem the manufacturers guarantee that the temperature of a moderate-sized house can be maintained at 25° F. above that of the outside air.

The stove is not expensive; and from what we saw of it in action at the late Food Exhibition in the Agricultural Hall, we can very strongly recommend it to the consideration of our readers.

## "VEGETABLE-WOOL" GOODS.

MESSRS. WELCH, MARGETSON, & CO. have submitted specimens of articles of underclothing, jerseys, &c., made of Lairitz's pine-wool material. The fabric, which is composed of fibre prepared from the leaves of the pinaster, or black pine, is soft and of fine texture. In cases where the pine is deemed likely to prove helpful these articles will be found admirably adapted for use, and pleasant for wear. From a sanitary point of view, they certainly appear to possess physical properties superior to those of animal wool.

## MEDICINE BOTTLE BAGS.

THESE paper bags are meant to save the dispenser the trouble of cutting up paper for wrapping medicine bottles in, and of stringing and waxing the parcel. They are made for bottles of all sizes, and seem a practical contribution to prompt and neat dispensing. They are the invention of Mr. George Jones, of Evans and Jones, Leadenhall-street.

# PHARMACOLOGY AND THERAPEUTICS.

## RESORCIN: A NEW ANTISEPTIC.

OBSERVATIONS have been lately made in Germany on the antiseptic and antipyretic action of certain members of the dihydroxylbenzol group, brenzcatechin, hydrochinon, and resorcin. The latter has received most attention. It is a substance obtained from certain resins, especially from galbanum, and has been recommended as an antiseptic by Dr. Andeer of Warzburg. Its formula is $C_6H_4(H_2O)$, and it is readily soluble in most liquids, including bisulphide of carbon and chloroform, and can be employed in all modes of pharmaceutical preparation. It has a peculiar odour, somewhat like carbolic acid, and has a bitter-sweetish taste. It coagulates albumen readily, and thus is suitable for use as a caustic. The similarity between the chemical constitution of resorcin and carbolic acid led Andeer to make experiments which showed that it possesses considerable power of arresting decomposition and fermentation. A one per cent. solution will retard fermentation, and a stronger solution will arrest it altogether, and destroy the movements of infusoria and low organisms. Applied in different forms and strength to the uninjured skin of men and mammalia, it causes neither discoloration nor any profound irritation or evidence of paralysis. Injections of concentrated solutions into the muscles cause toxic effects. Application to the moist lips causes a white eschar. Administration by the mouth causes, if long continued, symptoms of poisoning, which are readily allayed by albuminate of iron and red wine. With the most intense toxic symptoms in men—convulsions, rigidity, &c., —elevation of temperature was never found. Analytical observations show that resorcin causes a considerable increase in the secretion of sulphur, and thus it appears to cause a breaking up of sulphur compounds in the body, and with this is an increase in the nitrogenous excreta.

Dr. Andeer formulates the following conclusions regarding the pharmacological action of resorcin. It is a good antiseptic for the prevention of all abnormal fermentation processes which are associated with putrefaction. In one per cent. solution it prevents all putrefaction in such substances as pancreas, blood, and urine, which usually readily

undergo decomposition. Such liquids keep their natural odour. A solution of the same strength arrests putrefaction when this has already commenced, either through direct destruction of the excitants of putrefaction, or by coagulation of the liquids which serve as pabulum to them. In artificially produced septic processes a solution of the same strength has an antiseptic action as powerful as that of carbolic acid, without being absorbed into the blood-current of the animal to the same deleterious degree as carbolic and pyrogallic acids. Artificial, punctured, and incised wounds always heal by first intention, if treated with this solution. Wounds of the cornea, conjunctiva, gums, or other mucous membranes, which have been irritated and infected with micro-organisms, heal rapidly if they have been cauterised with resorcin, and its application is equally efficacious in the treatment of subcutaneous abscesses and erysipelas. A 1 or 2 per cent. solution has no more action on the uninjured skin than plain water, and causes no eruption. It is thus well suited for use in the form of spray in surgical practice. Andeer recommends it also in abnormal processes of fermentation connected with the mucous membranes, in septic processes of the buccal cavity, "mycosal" affections of the stomach, intestine, and bladder, for the cauterisation of catarrhal, tubercular, and syphilitic ulceration, and in diphtheritic affections. For internal use, the dose recommended is a teaspoonful of a solution of one to five grammes, in one hundred parts of water. Alcohol, glycerine, and syrup of orange-peel are convenient liquid vehicles.

Lichtheim has investigated the properties of the same substance as an antipyretic. Two or three grammes in solution caused, in a few minutes, giddiness and tinnitus, flushing of the face, acceleration of pulse and respiration. In ten or fifteen minutes the patient began to perspire freely. With the sweating the primary stimulant effect rapidly subsided; the pyrexia also subsided. An hour after the administration of the resorcin the pulse and temperature had fallen to the normal, and the diaphoresis had ceased. The depression of temperature amounted in some individuals to 3° C., and the fall in the pulse-rate to one-third. The antipyretic effect, however, was found to be slighter the greater the tendency of the febrile disease to spontaneous remission. In pneumonia and erysipelas the fall of temperature was slighter than in typhoid fever, and severe cases of the latter were influenced less than slighter cases. The antipyretic effect was usually proportioned to the diaphoretic action, and was of briefer duration than in the case of salicylic acid and quinine; in about three hours it again rose rapidly, often with a rigor. The dose can, however, be repeated without injury to the patient. As a rule, little excitement was caused by it, but occasionally it produced transient delirium and tremor. The urine, after its administration, assumes a dark brownish-black colour on exposure to the air; and on the application of hydrochloric acid and heat, a dark-brown precipitate is produced, probably an oxidation product. The pulse, under its influence, becomes less frequent, and dicrotism becomes slighter. It has no apparent specific effect in pneumonia, erysipelas, or typhoid, and in acute rheumatism it has no influence on the joint affection. In intermittent fever, however, it has an apparently specific action, comparable to quinine.

### HYDROCHINON.

Another member of this group, hydrochinon, has been investigated by Brieger, who finds that it possesses a stronger antipyretic action than resorcin; ·2 gramme depresses the temperature half a degree Centigrade. Larger doses, up to a gramme, cause symptoms of excitement similar to those caused by resorcin. Like it, also, the effect on the temperature in disease is very brief. It has no local irritating effect, and, injected under the skin, produces no more disturbance than water.

### SALICYLATE OF SODA POISONING.

The disturbance of the special senses which results from salicylate of soda is usually believed to be confined to the ear. Slight disturbance of sight has, however, been recorded by several observers, and in a case recorded by Gatti complete transient amaurosis was observed. The patient was a girl, sixteen years of age, suffering from acute rheumatism, and had taken, in the course of ten hours, two drachms of the drug. Three hours after the last dose she awoke from sleep totally blind, with considerable mydriasis, but no disturbance of sensibility of the cornea or of the conjunctiva. There was no visible change in the fundus oculi. There was considerable deafness. The urine did not present the salicylate reaction. Ten hours later, on waking from a sound sleep, sight had perfectly returned. Mydriasis and deafness continued for some time longer. Both urine and saliva continued free from the salicylate reaction, which seems to show that the drug was retained within the system instead of being eliminated.

### ACONITIN.

Aconitin is a remedy which practitioners in this country have always hesitated to give internally on account of its highly poisonous properties and the uncertainty of its purity. The difficulty in dispensing so powerful a drug, especially in the form of pills, increases the liability to accidents. This hesitation will not be lessened by cases reported recently at Bordeaux by Dr. Armaignac, and from Germany. A patient suffered from violent pains in an eye the seat of cataract. Pills containing each a quarter of a milligramme of aconitin ($\frac{1}{114}$ gr.) were ordered, four to be taken daily. On the first day no special influence was observed. On the second, vomiting, giddiness, and prostration occurred, and the patient was found in a state of syncope, cold, with a cadaveric aspect, and a pulse of 44. Under the use of stimulants, and subcutaneous injections of sulphuric ether, the patient gradually recovered. In Germany three cases of poisoning by French aconitin are reported by Busscher. The doses which occasioned toxic symptoms were respectively four-tenths of a milligramme (about $\frac{1}{114}$ gr.), 1½ milligrammes (about $\frac{1}{74}$ gr.), and 4 milligrammes (about $\frac{1}{17}$ gr.). In the last case death occurred. Convulsive symptoms occurred first, and were followed by narcosis. The dose had been ordered by a practitioner under the impression that the French and German aconitin were similar in strength.

If aconitin is given internally at all, it is certainly unadvisable to use any form except that which is crystallised. The term was formerly, and still often is, an amorphous alkaloidal substance, which contains, in addition to the crystallisable aconitin, variable quantities of much less active basis. Another cause for the uncertain strength of this preparation arose from the readiness with which the crystallisable aconitin is decomposed in the preparation. Various chemical reagents split it up into benzoic acid and an almost inert base (aconine). Hence a demand for the pure crystallised alkaloid has sprung up, which is, according to the *Chemists' Journal*, very much in excess of the supply. The demand comes especially from America. Pure crystallised aconitin can only be prepared from Aconitum napellus, and this plant is not grown in America in sufficient quantities to enable manufacturers there to supply the local demand, and in Europe it is prepared only on a very small scale.

### HYOSCYAMIN.

Unpleasant toxic symptoms after the use of moderate doses of hyoscyamin have been reported by M. Empis. The patient was suffering from paralysis agitans, and a twelfth of a grain of hyoscyamin caused symptoms of intoxication, while a second similar dose given on the following day caused nausea, violent delirium, tetanic spasms, dyspnœa, dysphagia, and strangury. The accidents subsided in the course of three or four hours. It should be remembered that active principles which cannot be crystallised are often of variable potency, according to the mode of preparation and the part of the plant from which they are derived, and they should therefore be used with caution.

### THE ALKALOIDS OF HEMLOCK.

Hemlock contains, according to the observations of several investigators, two active principles: conia, having a paralysing influence on the central nervous system; and another agent, acting like curara. A salt of hydrobromic acid, obtained from hemlock, has an action similar to conia; and Prevost of Geneva has asserted that the paralysing effect of this salt is due to an action on the motor nerves—i.e., that it also acts like curara. This conclusion has led M. Bochefontaine to make a fresh series of investigations on the action of conia. He finds that it is readily absorbed from the stomach, relieving local pain, and also inducing sleep. It abolishes reflex action and sensibility. After its administration, stimulation of the central end of a divided sciatic nerve causes neither pain nor reflex movements, while muscular contraction is still produced by stimulation of the peripheral portion of the nerve. These effects are diametrically opposite to those caused by curara; and the difference of action is further brought out by a comparative experiment on two frogs, which shows that conia lessens or abolishes

the physiological properties of the nerve-centres, before acting, like curara, on what Vulpian has called the "neuro-muscular junction." In both dog and frog a sufficient quantity abolishes all nervous excitability, but this dose is always fatal.

Regarding the crystallisable salts of hydrobromic acid which can be obtained from hemlock, M. Bochefontaine finds that they may be divided into two groups. One is yellowish, is very toxic, and has the typical action of conia. The other, colourless, is less powerful, and has a different action. It has the same effect upon frogs as curara, but, instead of recovering as they do after a small dose of curara, they do not recover from such a dose of the salt as causes a similar effect on motor excitability. Even a dose insufficient to abolish voluntary movements causes death at the end of two or three days. Successive crystallisation of these salts tends to eliminate that which acts on the central nervous system, and to isolate the curarising principle.

### THE ACTION OF PILOCARPIN ON THE PUPIL.

The mode of action of drugs which affect the pupil has always been a somewhat obscure subject, and an investigation into the mechanism by which pilocarpin contracts the pupil, by Drs. Laborde and Fitzgerald, is of considerable interest. Five milligrammes of the hydrochlorate of pilocarpin injected beneath the skin of an animal determines, in five minutes, not merely general diaphoresis, but also a strong contraction of the pupil, and this even though the third nerve has been previously divided, so that the central influence on the sphincter is at an end. The drug must therefore act by stimulating locally the fibres of the sphincter, or it must paralyse the sympathetic innervation of the dilating fibres. The local action, although intelligible when the drug is applied locally, is scarcely conceivable when it is introduced into the general system. The action on the sympathetic seems the more probable. If the third nerve has not been divided, and the action of the drug is closely watched, the first effect is a fixation of the pupil in a state rather of mydriasis than of myosis, apparently due to a simultaneous paralysis of both muscles; then the sphincter gets the ascendancy, and the pupil slowly contracts. That such a double action really takes place is shown by the effect of the drug when the sympathetic has been divided, the third nerve being intact. Then, the action of pilocarpin is to slightly dilate, not to contract, the pupil. Thus there is reason to believe that the drug acts as a paralysing agent upon both sets of nerves to the iris, and the myosis is due to its action upon the third nerve being less than its action on the sympathetic, or to the fact that, when both are paralysed, the tonic force of the sphincter is the more powerful. It may be noted, however, that Albertoni, and recently Harnack and Meyer, have come to a different conclusion. Finding that when the pupil is strongly contracted by pilocarpin, irritation of the cervical sympathetic still gives rise to considerable dilatation, they believe that pilocarpin causes contraction by stimulating the third nerve. The fact, however, is quite reconcileable with the observations of Laborde and Fitzgerald, since the paralysing action which they assume may be on the central connexion of the nerves, and then stimulation of the trunk would still cause contraction of the dilating fibres.

### JABORIN.

In connexion with the slight mydriatic action which Laborde and Fitzgerald observed, it may be remarked that jaborandi has been found by Drs. Harnack and Meyer to contain an alkaloid, which they have termed jaborin, which dilates the pupil and has an action on the heart, the salivary glands, the intestines, and the central nervous system, exactly like atropin, and which is found also, like it, to antagonise the action of muscarin. These authors point out that many commercial preparations of pilocarpin contain also jaborin, and the presence of this substance may explain the mydriatic effect of pilocarpin observed by Laborde and Fitzgerald, at the commencement of its action and after the sympathetic had been divided. It is evident that to furnish conclusive evidence that pilocarpin acts on both sets of nerves, their experiments must be repeated with a preparation of pilocarpin from which all jaborin has been removed. It is possible that jaborin may turn out to be actually identical with atropin or with hyoscyamin. Professor Ladenburg of Kiel has lately asserted that there are only two mydriatic alkaloids, atropin and hyoscyamin—daturin, duboisin, and hyoscyamin being not merely closely related but actually identical.

## LEPROSY.

*To the Editor of* THE LANCET.

SIR,—Cases of true leprosy are not so rarely seen in this country as it is generally supposed. We have met with them from time to time in the seaport towns on the north-east coast, having been brought over from Scandinavia; and, indeed, we have reason to think that they are occasionally overlooked. Although there can be no question as to the nature of Mr. Startin's case, still I think he is somewhat in error when he states (apparently on good authority) that "there could not be a more typical case." I have seen and carefully noted the lepers in the "Spedalskhed" hospitals of Bergen, and am of opinion that this case, taken as a type, would not have afforded the best representation of a leper, as it appears to have exhibited somewhat sparingly the distinguishing features of both the tubercular and anæsthetic varieties. A well-marked example of the tubercular form of the disease, besides the tumefaction of the corion, deposits of pigment, &c., presents the characteristic tubercles, hard or soft, as the case may be, on alæ of nose, on ears, eyelids, lips, or conjunctivæ, and as far as this special class (which is by far the larger in Norway) is concerned, a case is certainly not typical without them. Nor is Mr. Startin's case a very good specimen of the anæsthetic variety, inasmuch as some of its distinguishing signs—viz., white (not discoloured), shining patches and areas, pronounced anæmia, mental torpor, and lardaceous deposits in internal organs, seem to have been absent. Notwithstanding Mr. Startin's opinion to the contrary, there is reason to believe, as I was assured by Drs. Danielsen and Moon in 1875, that leprosy is contagious during the acute or exanthematous period, although it is certainly not so in the later stages. I confess it is never contracted by the nurses or attendants in the hospitals in Bergen, but this is accounted for by the fact that the acute stage is past when the patients are admitted.

In Norway leprosy occurs pre-eminently amongst the dirtiest of the poor, ill-housed, ill-fed, and ill-clothed inhabitants, and although stale fish is a staple article of food with this class, there is no evidence whatever to prove that its consumption operates more than any other predisposing cause in the production of "spedalskhed." Dr. Manson, I read a few years ago, received some reward from the Chinese Government for the discovery that leprosy was caused through the introduction of a poison into the blood by the bite of the mosquito, and although little has been heard of this discovery since, the idea seems to receive support from many facts, and explains the curious occurrence of that dreadful malady in the arctic regions, where the mosquito abounds. We know little else that is new concerning the etiology of leprosy, since the committee of the Royal College of Physicians published their report in 1867, I think it was, but it is very desirable that its occasional presence in our midst should not be forgotten, in order that it may be at once recognised and not confounded with scrofula, syphilis, or other diseases which it often closely resembles. Mr. Startin's case is, in my opinion, well worthy of record.

I am, Sir, yours faithfully,

Hackney, Nov. 1st, 1880. SAM. WILSON, M.R.C.S., &c.

*To the Editor of* THE LANCET.

SIR,—The following will bear out Mr. Startin's statement in the case of "True Eastern Leprosy," published in THE LANCET of Oct. 30th—viz., that eating of bad fish does not produce leprosy:—

In 1875, when civil surgeon of Pooree, Orissa, I was investigating the theory of fish diet producing leprosy, and directed my attention to the Teloogoos, a class of fishermen who live in an isolated village of their own on the sea-coast. They number in all, I should say, about one thousand; their diet consists almost exclusively of fish (with vegetables, when procurable), and at the time I made my inquiries *I failed to detect a single case of leprosy in the whole village*, although leprosy is common enough in the city of Pooree, especially amongst the pilgrims. I may further add, that the Teloogoos were very partial to a form of dried decomposed fish, dried by exposure to sun and air.

I am, Sir, yours faithfully,

H. W. HILL, M.B.,

Manchester, Nov. 3rd, 1880. Surgeon, Indian Army.

# THE LANCET.

*LONDON: SATURDAY, NOVEMBER 13, 1880.*

THE commencement of a new session at the medical schools, and the announcement of an organisation designed to bring the Registrars of hospitals into close and practical relations in their common work, offer a fitting opportunity for the suggestion of one or two considerations of great moment to the progress of the healing art. Hospital work is continuous, but it is formally utilised for scientific purposes both at the schools and in the Societies chiefly during the season on which we are entering. Will those of our readers who are responsible for collecting the figures and facts by which the practice of medicine and surgery throughout the country is governed bear in mind how meagre and vague these data generally are when they come to be viewed in the light of the exact science of statistics? Notwithstanding the pains and carefulness of the great majority of observers, the records at command for the purposes of the statistician are comparatively more scanty than those furnished by the recognised workers in any other branch of science. This is in part, doubtless, due to the fact that the hospital services provide, after all, only a very limited field of observation, but it must not be forgotten that professional work generally takes its tone from, and in great measure follows the lead of, the hospitals. If a better system of reporting were adopted at the teaching centres, the improvement would, we may hope, speedily spread to the outermost circles.

What science—and therefore art—needs is a return under a common system of notation for the record of details of *all* cases falling under observation. Clinicians seem to forget that no "average" or "mean" can be accepted, more particularly when worked from a small number of facts, until it has been corrected by collation with the great mass of comparable facts to which it is naturally related. For example, the rates of mortality in particular diseases require to be corrected by the rate of mortality for disease as a whole, and this is especially necessary when the numbers forming the base of the calculation are small. So is it with each member of the series of medical facts and phenomena. It is impossible to form a true estimate of the comparative excellence of any two methods of treatment, or to ascertain the real significance of any symptom, unless the materials for the judgment to be formed have been collected and compiled in accordance with the known and inviolable laws of statistics. At present only selected cases are reported—or, as it would seem, even recorded in a *clinical* sense—at the hospitals. This is as though only the death of wealthy or poor, or tall or short, persons, should be returned to form the bases of a death-rate; and, to complete the absurdity, the *principal* factor, age, is either omitted or disregarded! The utmost that can be deduced from the reports of series of cases or the tables appended to hospital annuals thus compiled, is the fact—in so far as it is a fact—that a certain proportion of the cases treated in a particular institution, or in a certain way, by some individual practitioner, has resulted as the report shows; and under precisely similar circumstances the experience *may* be repeated. In order to make the returns supplied to the profession of any practical value, it would be necessary to work out the life status and expectancy of each hospital population and of the populations from which its individual members are taken. What, for instance, is the worth of the simple fact that a particular percentage of cases treated in a certain way, either medically or surgically, died or recovered, unless we are furnished with the means of judging how much of the mortality or recovery noted was due to conditions, such as the age and class of the population to which they originally belonged, and the vital expectancy of the hospital population into which they were imported? It is startling to discover the utterly valueless character of the great bulk of the returns commonly furnished. There ought to be a trained statistical officer attached to each of the hospitals, whose duty it should be to work out and correct the data furnished for general remark. If the existing Registrars are so qualified, and can be so brought together by the new Society as to work in harmony, great good will certainly result from the movement.

Meanwhile, the mere creation of a special clinical registry, constituted by an Association of Medical Registrars, will not place the returns on a satisfactory footing unless the general facts needful to make each special series complete are collected. It will be well if any recent or concurrent event should direct the attention of the Medical Faculties of hospitals to the indispensable, and, it would have seemed, self-evident, obligation under which they lie to organise and maintain a perfect system of clinical reporting. Notes of every case should be taken officially, and for the Faculty, with a view to medico-statistical purposes. The waste of priceless material which has been tolerated is astonishing, when we come to look at it in the aggregate. Questions relating to ages, heights, vital capacities, weights, and even the presence or absence of particular symptoms in certain morbid states, may at any moment crop up, and a general return may be essential to an accurate opinion; but although the data have been, so to say, thrown at our feet for years past, we have not taken the trouble to gather them. If medical men, who need the aid of statistics more, perhaps, than any other class of active workers, were better versed in the laws which govern the logic of figures, this system, or rather want of system, would not be longer tolerated.

THE progress of the cinchona cultivation in India has a very practical interest for the inhabitants of this and other countries. Large quantities of cinchona alkaloid are annually needed in India in the treatment of the malarial fevers which infest many parts, and the growth of enough bark in the country to supply Indian needs will afford appreciable relief to the too great demand on what is produced by other countries. Still greater will be the advantage if, as seems likely, cinchona bark can be grown in sufficient quantity to permit of its export.

The annual reports of the superintendent of the Government cinchona cultivation in Bengal, and of the Government quinologist, for the year 1879-80, have just been published, and the facts which they describe are of a very

encouraging character. Both are from the pen of Dr. G. KING, M.B., who has during the year fulfilled the duties of both posts. About three-quarters of a million of young trees were planted, and the efforts to propagate the *C. calisaya* and hybrid varieties have at last begun to bear fruit. The greater success of the Dutch in growing the former in Java led to a visit to those plantations by Dr. KING. He found that the results were largely due to the superiority in the volcanic soil and equatorial climate of Java. Dr. KING gained, however, some practical information on several points, one of which is the advantage of the Dutch method of shaving the bark from living trees, instead of uprooting them altogether. The entire produce of the plantations for the year was 361,590 lb. of dry bark, as against 261,659 lb. in 1878–79—a very satisfactory increase. Of last year's produce, 29,520 lb. were yellow, and the rest red bark. It is proposed to take 350,000 lb. of red bark as the crop of next year, but should it be found, as the season advances, that more is likely to be wanted, it is said that it will not be difficult to increase the quantity to 400,000 lb.

During the year four plants were received from Sir J. D. HOOKER of the valuable species of cinchona which yields the bark known in commerce as Carthagena or Columbian. Although long known in the market by its produce, this species has never been brought into cultivation in India. Seeds were brought from Columbia by Mr. R. CROSS, who was commissioned by the Secretary of State to go to South America to procure them. The seeds were sown at Kew, and the resulting plants sent to India. They are growing well, and there is every prospect that they will be successfully propagated.

The greater part of the bark is employed in the preparation of the "Cinchona febrifuge," an extract consisting of the more or less impure alkaloids. No less than 9434 lb. of this febrifuge were prepared, as against 7007 lb. in the previous year. The question of manufacturing a superior drug has been under consideration by a Special Committee appointed by the Government in 1877. After discussing the question of how far the febrifuge could be improved by excluding its amorphous constituents, the Committee recommended for trial a mixture of four parts of sulphate of quinine, eight of sulphate of cinchonidine, and nine of sulphate of cinchonine. The result of the trial showed that the antiperiodic properties of the febrifuge are not diminished by excluding the amorphous alkaloids, while the triple sulphate has the advantage of creating less nausea and gastric disturbance than the ordinary febrifuge. At the same time the Committee considered that the proportion of cases in which the febrifuge had been found to create nausea was so small, while its efficacy in the treatment of fevers has been so unmistakably established, that the remedial advantages to be gained by substituting for it a finer preparation are not sufficient to warrant any great increase of cost. They recommend, however, that the experiment should be made of erecting a small factory in which the preparation of the pure alkaloids of *Cinchona succirubra* could be carried on, so that the cost of producing the triple sulphate on a large scale can be ascertained. This proposal is now under consideration by the Government of India. The sale of the febrifuge to the public has increased considerably, a sure proof that it is rising in general estimation; 2757 lb.—more than one-quarter of the total produced—was thus sold. The substitution of this febrifuge for the imported quinine has effected a saving of four lakhs of rupees, and the total saving since the factory commenced working has been greater than all the plantations have cost since they were opened.

The Calisaya bark is less suitable for the manufacture of the febrifuge than the red bark, and a surplus stock which had accumulated has been sent to Europe during the year. There is a prospect, however, that quinine may be made on the spot from this bark. The superintendent of the factory, Mr. GAMMIE, who is strongly recommended by Dr. KING, has devoted much time to an endeavour to prepare pure sulphate of quinine. His efforts have been so far successful that he has produced from both Succirubra and Calisaya barks quinine which is indistinguishable in appearance from that sold by the best European makers.

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IT cannot but be a matter of deep regret to all who take an interest in our Navy—and what Englishman does not?—that the Government have as yet given no indication of their intentions with regard to the Medical Department of that branch of the public service. The lamentable condition of unpopularity into which it has been permitted to fall has been only too well shown by the want of candidates for admission into it. When the Admiralty advertise twice, or sometimes thrice, a year for candidates, they are unable to obtain more than five, while the Army gets above eighty, and the Indian Service usually more than twice as many as they have vacancies to fill. The advice given to the students at the medical schools is, whatever you do, avoid the Navy, and this will continue to be the case until steps are taken to place the department more on a footing with that of the sister service, and to remove those well recognised grievances which afford justifiable grounds for this otherwise unpatriotic course. The Government has, since coming into office, had sufficient time to have inquired into this state of matters, and to have ascertained the extent of the evil and the nature of the remedies which are required, but yet the only resolution at which they appear to have arrived is that the question of the re-organisation of the service will be considered when the estimates for next year are being prepared. This course is open to the serious objection that the alterations which may be adopted will not be known till close upon the period when the next competitive examination will be held. In the meantime the young medical men who think of entering the public service will have made up their minds in favour of those two branches of which the conditions of service are known, and the Navy will be again unable to obtain the number requisite to fill up vacancies. It is quite clear that something must be done, and it is very difficult to understand the policy of postponing the consideration of so unavoidable a subject to a time when the office-work is increased by the additional labour involved in the preparation of the general estimates. Lord NORTHBROOK is, we believe, fully alive to the necessity of obtaining medical officers for the Navy, and he may be well assured that he will never get anything like an adequate number until the conditions of service are greatly ameliorated. Among those which most urgently require attention are the rates of pay and half-pay, which

must be brought more into accord with those of the army medical officers; the system of compulsory half-pay must be modified, or some compensation granted for the loss of time it causes, and which seriously affects the rate of retirement; steps must be taken to assure to medical officers the choice of cabins in accordance with the regulations, and to prevent them being deprived of their right in this respect at the caprice of the captains; the rule requiring five years' service as Deputy Inspector-General before the officer becomes eligible for the higher grade, must be abolished; it would also be advisable to introduce a grade corresponding to that of Brigade Surgeon in the army, and to modify the rule respecting the age at which compulsory retirement is enforced, with a view to improve, to some extent, the prospects of promotion for the juniors. We sincerely trust that Lord NORTHBROOK will without delay direct his attention to this very important subject, as we feel assured the more he looks into it the more will he see the need for prompt action, and the sooner he puts the service on a proper footing, the more likely will he be to obtain an adequate supply of well-qualified candidates.

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DR. GROSS of Philadelphia, in his work on Tumours of the Breast, has given statistics, partly original, partly obtained from other published sources, to show the natural duration of life in cancerous disease of the breast, and the influence upon it that partial or more complete operations have. It must be understood that Dr. GROSS's statistics refer only to malignant tumours of special histological characters—true carcinomata, and do not include all malignant growths met with in the female mamma. In 67 cases allowed to run their natural course the average duration of life was twenty-seven months, while in 224 cases, in which death occurred after operation, and with recurrence of the disease, the average duration of life was thirty-nine months; so that in these, the less successful cases, active surgical interference was enabled to add, on an average, a year of life in addition to the physical and mental comfort following the removal of a cancerous mass. But there is a better aspect of the question than this. Out of 519 cases in which an operation had been performed, as many as 47 were known to be free from any recurrence of the disease for periods varying from three to nearly sixteen years; 4 only of these 47 were dead, so that it is impossible to say how long the freedom from cancer will continue. The average time since the operation in the whole 47 was five years and nine months, and the disease had existed before operation on an average for eighteen months, so that the average duration of life in these cases, the majority of which were still alive, is seven years and a quarter. Dr. GROSS maintains that as death from metastases occurs at thirty-one months, and the average date of death of those who succumb with or without operation is thirty-three months, any patient who is alive and well, without any evidence of local or distal recurrence, three years after the removal of a cancerous tumour of the breast, may be considered to be cured. In the language of averages this assertion is no doubt sufficiently accurate, but there are so many cases on record where recurrence has been noticed at longer intervals, that, small though the percentage of such cases in the grand total is, it is obviously unsafe to apply the average rule to individual cases, and speak with too much assurance of complete permanent recovery.

Valuable lessons are to be learnt from a study of the cases in which surgery fails to obtain results so good as these. One is the great frequency of local recurrence within three months from operation—more than 60 per cent.—with a steady and rapid diminution after that time. Another fact which comes out is that the axilla is far more often the seat of recurrence when the mamma only is excised than when the axillary glands also are removed. Each of these deductions points to the urgent necessity for complete, thorough operations, for cases in which the tumour reappears within a few weeks from its removal must be regarded as continuous growths rather than as true recurrences. Surgeons have naturally avoided opening up the axilla and interfering with the lymphatic glands unless they were evidently affected, and then oftentimes the prospect of doing good has been held to be too slight to warrant the operation. Where, however, the disease to be attacked is so deadly, bold measures are justifiable, and the only ones to be relied on. The direction in which all our recent experience points is that an operation for cancer should be not only early but very far-reaching, involving the removal of the neighbouring glands even when not palpably affected, and that in this way we may attain success far better than by less bold procedures.

In Dr. GROSS'S statistics about one in six of the patients died of the operation itself, but this surely is a higher rate of mortality than is at all usual. Some years ago, before the application of strict asepticism to surgery, Sir JAMES PAGET spoke of 5 per cent. as the mortality which would probably always be met with. He was no doubt referring to the removal of the mamma alone, and the excision of the axillary glands increases the danger to some degree. But as by slow careful dissection injury to the bloodvessels can be obviated, and by well applied dressings and drainage, especially Listerian, the danger of retention and putrefaction of inflammatory exudation leading to blood-poisoning may be prevented, the additional risk is out of proportion to the subsequent advantage that accrues from this procedure. Such clinical experience as we have quoted above has an obvious bearing upon the obscure pathological question of the origin of cancer, and lends great support to those who regard it as in the first instance a local disease.

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# Annotations.

"Ne quid nimis."

## M. PASTEUR'S INOCULATIONS.

OUR Paris correspondent enabled us to give, last week, a full account of M. Pasteur's remarkable communication to the Académie de Médecine, on his method of inoculation for the prevention of the "cholera of fowls." The facts are of great interest in their immediate application, and of still higher importance in the wider inferences which they suggest. M. Pasteur had previously ascertained that the disease is due solely to a microscopic organism which may be cultivated artificially, and, even after many successive cultivations, will still infallibly produce the disease. Of still greater importance, however, in connexion with human pathology, is the demonstration which his experiments supply, that a disease due to an organised contagium affords some protection

against its recurrence. A second attack is inversely proportional in severity to the first, and if the first attack was a severe one subsequent inoculation with the most virulent virus will produce no effect. The mere fact that the same organism, under different conditions of its own energy—differences which are expressed by no apparent morphological variation—produces the disease in different intensity, is one of great significance. Another important fact is that a very chronic form of the disease sometimes results from inoculation with a virulent virus, and that this appears to be due to the organisms becoming localised in certain organs, and remaining and developing there for months, and then suddenly passing into the blood, with the result of causing the bird's speedy death. The organism then contained in the blood is of considerable virulence, killing almost invariably. Its virulence is preserved by successive inoculations, if the interval between these inoculations is short, but is lessened if these intervals are long. Nevertheless, this virus, thus attenuated, will still produce an attack of the disease which protects against subsequent attacks. If the series of cultivations at prolonged intervals is extensive, the virus may ultimately lose all its virulence, apparently by its death. M. Pasteur attributes the attenuation to the influence of atmospheric oxygen, for he finds that if the organism is cultivated in hermetically sealed tubes, containing but little oxygen, the virulence remains unlessened, even after many successive growths at long intervals.

We have drawn attention to the chief feature of M. Pasteur's communication, not only on account of its interest and importance, but also to point out that its most important fact has been already anticipated by one of our own investigators in the same field. The fact is that successive cultivations may attenuate a virus, which ,thus weakened, still confers protection against the inoculation of the virus in its most virulent form. The anticipation to which we refer is by Dr. Greenfield, and is of interest not only as a discovery of a general principle, but as showing that the observations of Pasteur have, indeed, the application to other diseases which this distinguished author suggests. We quote the anticipation in Dr. Greenfield's own words (THE LANCET, June 5th, p. 866):—"Further experiments have led me to the conclusion that the poison [of anthrax] becomes progressively less virulent in successive generations of artificial cultivation. I have thus been able to obtain a modified virus, which, when inoculated, produces much less severe symptoms, and appears to be partially protective against future more severe attacks."

## CORK FEVER HOSPITAL.

A GENERAL meeting of the committee and subscribers of this institution was held on the 4th inst., to consider certain changes in the rules of the hospital as recently recommended by the Managing Committee, and to elect a resident medical officer and apothecary in the room of Dr. Adderley, resigned. A report was read from the medical officers, who entered a protest against the recommendations of the committee for the internal management of the hospital, and drew attention to Rule 4, which laid down the condition that the assistance of the physicians should be obtained before new rules were framed, a provision which was not acted upon. Further, they submitted that the physician in charge of a case was the only judge of the necessity of holding a consultation, but they had no objection to meet in formal consultation in any case involving special difficulty in its management, and suggested as a substitute for the rule of the committee, that the physicians when they thought it necessary in any exceptional case where there was a difficulty or doubt should hold formal consultations. As regarded the rule prohibiting the physicians prescribing any medicine not belonging to the Pharmacopœia and sanctioned by the committee, the medical officers stated that they could not consent to be bound by any Pharmacopœia or by any other collection of formulæ, as such restriction would be detrimental to the interests of their patients, and would greatly hamper the staff in the discharge of their duty; while in reference to the latter part of the proposed rule, they reminded the committee that urgent cases might occur which, demanding immediate treatment, would compel the medical officers to wait for a meeting of the committee. At the same time the physicians did not object to consult as to the propriety of using an extraordinary remedy when the occurrence of an exceptional case might require to be given, when ordinary remedies had failed. After some discussion the further consideration of the matter was adjourned to that day fortnight, in order to give the subscribers an opportunity of considering it more fully. Mr. Atkins was unanimously elected resident apothecary.

## NEW THEORY AS TO THE PATHOLOGICAL CHANGES IN THE BLOOD IN ACUTE RHEUMATISM.

AT the last meeting of the Cambridge Medical Society, held on Friday, Nov. 5th, Professor Paget, President, in the chair, Professor Latham advanced a new theory as to the pathology of acute rheumatism. He maintained that the first step was a lowering of the action of the "inhibitory chemical centre," or nervous centre, which controls oxidation in the muscular tissue. Following upon this, the oxygen from the oxyhæmoglobin, instead of entering the muscular tissue to be exhaled therefrom in the form of carbonic acid gas, had its sojourn in the tissue shortened, and passed into the blood in the form of lactic acid (a substance which appears in muscle almost instantaneously with its death); that the oxygen acted also more energetically on the muscular tissue, and the resulting lactic acid being oxidised rapidly in the blood, instead of in the muscular tissue, an abnormal amount of heat or pyrexia was developed.

He then argued that quina lowered temperature by simply impeding the carrying of ozone from the lungs to the tissues by the red blood-corpuscles, as in Binz's experiments with ozonised turpentine and guaiacum; and so the remedy *might* act beneficially in rheumatism, but would have no effect on the *materies morbi*. Salicylic acid, on the other hand, lowered the temperature and cured the disease by chemically combining with the substances from which the lactic acid is derived, and producing less heat than would result from the oxidation of that substance. He showed how the theory advanced explained the relapses which so often recur after apparent cure with salicylic acid, the necessity for large doses of the remedy, and the reason why it should be less curative in other pyrexial disorders, such as pneumonia, typhoid fever, &c. Referring to locomotor ataxy as an example, he suggested that possibly the local symptoms might be the result of the lactic acid acting upon the posterior columns of the spinal cord, producing functional change; and, in reply to a question in the discussion afterwards as to the connexion between rheumatism and chorea, considered that this disorder was the result of the lactic acid inducing functional change in the nervous centre which co-ordinates muscular movement, that centre being weak, and therefore a point of minimum energy, and this condition being hereditary or acquired. He also applied his theory to explain why the same cause (cold), which in one person appears to produce acute rheumatism, in others produces pneumonia, tonsillitis, &c.

Since the meeting Dr. Latham has extended his theory to diabetes. If it be true, it ought, he says, to explain the phenomena of that disease with a normal or subnormal temperature, and he maintains that the lowered nerve action is sufficient to do this. Salicylic acid may then (whilst the patient perhaps is taking ordinary diet) cause the sugar to disappear

from the urine and lessen the amount of that secretion without even altering the condition of the nervous system upon which the symptoms depend.

## PREVENTABLE DISEASE AND SANITARY WORK IN INDIA.

THE Indian Famine Commission does not appear to have been very highly impressed with the progress of sanitary work and its influence on the prevention of disease in India. In the second part of their report they give an appalling picture of the loss of life by preventable diseases among the native population, and they say with reference to sanitary progress that "there is no room to doubt that the work hitherto achieved by district officers or the Sanitary Department falls very far short indeed of what is necessary to secure satisfactory improvement, or what the administration could effect if the matter were taken up seriously and funds were available." It seems to us that the apathy or indifference implied here is inconsistent with the concluding words of the sentence, to say nothing of the extreme difficulties which beset sanitary progress in India, arising from the habits of the natives and their prejudices, and which the Commission refer to. The observations of the Commission on the chronic character of the agencies which contribute to so formidable a proportion of fatal preventable disease, particularly in time of famine, the peculiar difficulties attending sanitary progress, and last, but not least, the limited funds available for securing this progress, prompt us to admire the advances which have already been made in the sanitary administration of India rather than to depreciate them and to impute indifference to the Government of India in the matter. We entirely agree with the Commission when they say that "every real step in advance made in this matter will have a most important effect on the health and the lives of millions and on their power of resistance in time of famine"; but we hesitate to accept their implied conclusion that the question of an "improved sanitation" (to use the marginal words of the report) had not been taken up seriously. It must not be overlooked, however, that, with one exception, the Commission was composed of Indian officials.

## HYDROPHOBIA FIVE YEARS AFTER INOCULATION.

M. COLIN related to the Académie de Médecine, at its last meeting, a remarkable instance of prolonged incubation of hydrophobia. The case was that of a man who died a few minutes after being admitted (on August 31st) into the hospital, presenting maniacal excitation, expectoration, fear of drinking, and apprehensions, during more lucid moments, lest he should injure those about him. The autopsy showed no lesions, but some small cicatrices were noted on the left wrist and in the front of the thorax. Further inquiries showed that the man had been ill two days only. On the first he complained of a severe pain in the hepatic region and extreme thirst, although he could not drink; as soon as he raised a cup to his lips he was seized with shivering and spasm. The next day he complained of severe sense of constriction in the pharynx and a feeling of a wish to bite. The symptoms thus seemed clearly those of hydrophobia. No history could be ascertained of a bite from a dog during the previous five years. On Nov. 2nd, 1874, however, in Algeria, he had been bitten by a dog, which was attacking a comrade, to whose assistance he went, and who was also bitten. The latter had his wounds cauterised the next day, and died in eight days of hydrophobia. The patient of M. Colin was cauterised half an hour after the receipt of the bite. Some authorities, as Devergie, have maintained that the cases of prolonged incubation are really cases of "nervous hydrophobia;" but the symptomatology of such a case as this seems too precise for the theory that an attack so virulent could result from "nervousness." Hydrophobia is relatively common among the soldiers in Algeria, especially in the interior of the country, at the farms, where there are Arab dogs; and it is still more common among the civil population.

In regard to these prolonged periods of incubation in hydrophobia, of which this case presents an instance most remarkable, if not altogether beyond the reach of criticism, it is worth while to refer to one of the results obtained by M. Pasteur, of which we gave an account last week. It has long been a favourite explanation of these cases to suppose that the virus remained localised in the wound, developed there, and only caused the symptoms when, in consequence of some adventitious circumstance, it passed into the blood. M. Pasteur has shown that this explanation is, as regards some diseases, not a matter of theory but of fact. He has found that in the chronic cases of "cholera of fowls" the poison does develop in certain organs, and not, as in other cases, in the blood, and that when, after a variable period, the organised poison passes into the blood, severe symptoms come on rapidly, and the creature soon dies.

## SUBJECTS FOR DISSECTIONS.

THE present supply of subjects is far from satisfactory. Notwithstanding that most of the London schools received some subjects during the summer months, a large number of students are still without parts. As a consequence of the inadequate supply applications have been made to some of the East-end Boards of Guardians, who have hitherto refused the privilege of allowing the schools to have the bodies of their unclaimed paupers for purposes of anatomical study. In most metropolitan unions this permission is readily given; and as by Act of Parliament only unclaimed bodies can be given up, it is difficult for us to appreciate the arguments which can have induced the visiting committee of the Shoreditch Workhouse to refuse their assent to the request. It is so obvious that, for obtaining any exact knowledge of the human body, a sufficient supply of subjects must be forthcoming, that we hope Boards of Guardians will not put forward any unnecessary difficulties, but will readily grant the authorities of the various medical schools every facility for carrying on such an all-important branch of medical education. The various safeguards laid down in the Anatomy Act are so stringent that the occurrence of any disrespect to the dead, or of outrage to the feelings of the relatives, is almost an impossibility; so that the lay authorities should carry out the spirit as well as the letter of a law which has been of so great service, not only to students of medical science, but to the community at large. We are glad to see that the Guardians of Bethnal-green have taken a fairer and more liberal view of this important question than their brethren at Shoreditch; and we hope that the other boards, to whom applications have been made, will follow their wise example.

## REMOVAL OF FOREIGN BODIES FROM THE EAR.

M. ROUSTEN recently presented to the Société de Chirurgie of Paris a paper describing a means of removing foreign bodies from the ear by means of a cannula, and cited four illustrative cases in which it had been successfully employed. He urged the adoption of this plan in preference to the use of a syringe. A commission consisting of MM. Desprès, Delens, and Sée reported in reference to this suggestion that injections of water are nearly always successful, and are free from the risks attending the use of instruments of any kind, and that this opinion, in which all surgeons are agreed, cannot be upset by a record of four cases only. In the subsequent debate M. Gillette mentioned a case in which a pea was lodged in the external

auditory meatus for seven years notwithstanding many attempts to remove it. At the end of that time it germinated and swelled, and M. Gillette carefully syringed twice a day, with the result of removing it on the fourth day. We refer to this paper and discussion because the danger of using instruments for the removal of foreign bodies in the ear cannot be too much insisted on or too constantly borne in mind. It is so tempting to use some kind of forceps, or hook, or probe, or snare, but experience has abundantly proved the needless danger of all such procedures. In no case whatever should any instrument be employed until a thorough prolonged trial of well-directed syringing has been made and found to fail. And then, if further steps are necessary, anæsthesia should be considered a *sine qud non* to any instrumentation, for a very slight movement of the head may easily suffice to destroy the membrana tympani and ossicles and set up mischief ending in deafness or even in death.

## THE CASE OF DISTIN.

WE must disclaim any sympathy with the maudlin sentiment which makes some persons affect to find evidence of insanity in the case of every outrageous criminal. At the same time it is impossible not to feel that a grave public scandal will be created if Distin, the convict awaiting execution at Bristol, is hung without a medical inquiry. This man has, it seems, attempted suicide on no less than seven several occasions, once by taking vermin-powder, twice by trying to drown himself in the harbour, once by jumping over a bridge, once by jumping out of a window, once by hanging, and once by cutting his throat. Had he died on either of these occasions the verdict would doubtless have pointed to "temporary insanity" as the cause. Is there no ground for suspecting insanity now that he has, in a fit of jealousy, killed his paramour? There is also a history of injury to the head, and it seems his mental soundness has been actually suspected, as he was once submitted to medical examination by a surgeon now deceased. In the face of such a tale as this, we will not question the common sense and humanity of Sir William Harcourt by supposing that he will hesitate to interpose. Without waiting for any agitation or pressure, it is the plain duty of the Home Secretary to order a medical inquiry, whatever the result anticipated may be.

## ON THE PART PLAYED BY THE STOMACH AND PANCREAS IN THE DIGESTION OF FAT.

A PAPER appears in the October number of the *Archiv für Anatomie und Physiologie* on the relative share taken by the stomach and the pancreas in the digestion of fatty substances, by Dr. Th. Cash. He begins by pointing out that Bernard long ago proved that the oleaginous constituents of the food must be emulsified before they undergo absorption through the agency of the intestinal, and especially of the pancreatic juices. His experiments were supported by those of Brücke, yet it has not been actually demonstrated that the breaking up of the fats into minute droplets and their investment with a soapy membrane, which is perfectly effected in the lacteals, is already accomplished in the intestine. Dr. Cash's experiments were undertaken under Ludwig's supervision, with this object in view. Dogs were kept fasting for eighteen hours or more. Food was now administered, and four hours subsequently the animal was killed with curare. The abdomen was at once opened and the intestine divided by ligatures into several portions of about a foot in length, so that each part retained the fluid it contained during life. The segments were opened, the contents tested with litmus-paper, and received in test-tubes. A quantity of water, equal to the fluid obtained, was added to each tube, warmed to 60° C., and filtered. After the solid residue had been heated in this way several times with water, the cloudy fluid which had passed through the filter was placed in a cylindrical glass and subjected to centrifugal action for an hour or two. The oily portion of the fluid after this treatment swam upon the surface of the water. The contents of the small intestine were invariably found to leave an acid reaction, and on the surface of the fluid which had been subjected to centrifugal action, oil-drops accumulated of various sizes, which, however, never presented the slightest tendency to the proper colour of an emulsion, whilst the oil-drops could be easily made to coalesce, and could then be easily emulsionised with a dilute solution of soda. It hence appears that fats are absorbed in the free state, and their conversion into an emulsion first takes place after absorption is effected.

## THE KANDAHAR DESPATCHES.

THE *Gazette of India*, received by the last mail, publishes the despatches of General Primrose, of Aug. 30th, relative to the siege of the city after the Maiwand disaster. Par. 38, details the medical officers for the different gates and posts of the city in case of attack, with the following instructions, made by Deputy Surgeon-General O'Nial:—"Each medical officer will put permanently at his gate two dandies, or doolies. He will find some fixed place for them, in which they are always to remain, and he will take steps to insure that this place is known by the officer in command. On the assembly being sounded he will proceed at once with six additional dandies, or doolies, and the necessary surgical material, to his post, and will report himself to the officer commanding at the time. Medical officers will take care that their doolie-bearers are well acquainted with the route from their respective posts to the European and native Base Hospitals, and will take precautions against their crowding, or in any way obstructing the communications. Each medical officer will render assistance to all wounded or sick men, of whatever branch of the service, within his area. Surgical operations involving any delay are not to be performed at these posts. Assistance is to be limited to what is absolutely necessary to the men's transfer to the Base Hospital. The officers of the Base and Field Hospitals will have everything necessary for the treatment of the wounded always in immediate readiness." Par. 52, brings to the favourable notice of his Excellency the Commander-in-Chief the names of the following officers who, during the siege, rendered great assistance in the performance of their various duties:—Deputy Surgeon-General J. O'Nial, Surgeon-Major R. T. Giraud, Army Medical Department; and Surgeon-Major J. Arnott, Indian Medical Department.

## MEDICAL MATTERS AT NEWCASTLE-ON-TYNE.

AS we anticipated, Mr. Page has been promoted from the position of Assistant-Surgeon to fill the office of Surgeon, rendered vacant by the resignation of Dr. Heath. The resignation of Dr. Heath is much felt by those interested in the work of the hospital and medical school. But it is gratifying to know that he retires in good health and with keen zest for the work of his profession. The elevation of Mr. Page creates a vacancy in the assistant-surgeonship, for which there will be a sharp contest. The candidates are: Mr. G. E. Williamson, F.R.C.S. Eng., Mr. J. D. Dixon, M.B., Mr. Hugh T. Bowman, M.S., M.B., and Mr. J. R. Baumgartner, M.R.C.S. It is probable that the contest will be principally between Mr. Williamson and Mr. Dixon, both of whom have strong claims on the governors. But it is no disparagement to Mr. Dixon to say that Mr. Williamson's claims are stronger than even his. He has distinguished himself as house-surgeon in the London Hospital, and succeeded in impressing nearly

all those who know him that he is fitted to take a high position in the practice of surgery. He is Mr. Dixon's senior; and not only has held the office of house-surgeon, but contracted typhoid in the discharge of his duties. He is, moreover, a Fellow of the College of Surgeons of England. There are over 100 students now in Newcastle, making it the largest provincial school, and larger than many of the London schools. Its pupils ought to do well. Not only is there a great field for medical and surgical teaching, but the Medical School is contiguous with the School of Physical Science, which is in a very thriving and effective state.

## THE EDINBURGH GRADUATES' CLUB.

THE quarterly dinner of this club took place on Wednesday, the 10th inst., at St. James's Hall. The gathering of members was large. Prof. Lister occupied the chair. In proposing "Our Alma Mater," he discussed the reasons of the great success of the Scotch Universities, and attributed it largely to the fact that the teachers had time and inducement to stick to professorial duties, even after attaining eminence in practice. Dr. Matthews Duncan proposed the health of Professor Lister in terms of high appreciation. Amongst other things, he said that Professor Lister had been driven to the South of France to perform some of those experiments that had so much raised the character of surgery, a state of matters which, he thought, discreditable to our Government, which ought to further and reward such investigations. Amongst the visitors were Dr. John Williams, Dr. Stokes, &c. There has seldom been a more numerous or pleasant meeting of the club.

## MEDICAL ATTENDANCE AND FRIENDLY SOCIETIES.

THE representatives of something like fifty Foresters' Courts have lately met in Plymouth, and discussed, among other things, the appointing a doctor for attendance on Friendly Societies and the families of members, the doctor to be confined to that work and prohibited from private practice. On being put to the vote, 28 were against and 25 supported the proposal. We agree with the majority in this division. To tie thousands of people to one doctor is to forget that the members of Friendly Societies, like other people, have their preferences, and if they have not, that at any rate their wives have. Moreover, the terms of remuneration offered for these appointments for doctoring wholesale are such as to attract only young men who want a start, and who then leave without any chance of establishing that permanent relation with a family which in a doctor is so valuable. "The family doctor" is not to be made in a year. He requires time and long experience. But he is as important to the working class as to the middle or upper class. These views are well indicated in a letter to the *Western Daily Mercury* by "Another Odd Fellow," and deserve great consideration.

## TREATMENT OF FRACTURES AT THE ELBOW.

IN a recent paper Dr. Lewis S. Pilcher draws attention to the outward obliquity of the forearm, and records some measurements he has made with the purpose of testing its degree and constancy. He has measured the angle formed by the axes of the humerus and ulna, and found that not only does it vary considerably in different people, but even on the two sides of the same subject. The full, free, and proper use of the limb depends upon this angle, and it is necessary to attend to its maintenance when setting fractures near the elbow-joint; but as the sound limb is no certain guide for the injured one, it is difficult to determine upon the normal obliquity if it has been altered by the injury. Dr. Pilcher also urges the relaxation of all muscles fixed to the fragments, and immobility of them until firm union has taken place; but we are unaware that these are other than the plainest and most universally held principles in surgery, although perhaps too often lost sight of in treating fractures near joints, from fear of anchylosis and the intervention of the bone-setting quack.

## THE HOSPITAL SUNDAY FUND AND THE ALL SAINTS CONVALESCENT HOSPITAL.

THE papers announce the payment by the Lord Mayor of a cheque to the above hospital for £519 16*s.* 4*d.* The announcement is accompanied with the assurance that the Lord Mayor, before paying the money, had satisfied himself that a Committee of Management had been "duly elected." The Hospital Sunday Fund will stand still better in public estimation for thus vindicating its own Rule 4, requiring every participating charity to have a duly elected committee. We may fairly expect of the Distribution Committee that it will not again throw on the Council, or any member of it, the unpleasant duty of vindicating the most vital laws of the Fund. There is some reason to believe that the Eastbourne Hospital is not the only hospital that failed in the conditions of a grant.

## "SUFFOCATING INFANTS."

ALLUSION having been obscurely made in the lay press to a suggestion of importance, for which the public are indebted to the late Mr. Wakley, we think it well to notice the matter specifically. In the course of his inquiries as coroner for Middlesex, Mr. Wakley discovered grounds for believing that a large proportion of the deaths by "overlaying" were caused by the abuse of alcohol. These "accidents" occur chiefly on Saturday nights, following the weekly debauch of the poorer classes among whom they happen. The mischief works, as Mr. Wakley pointed out, in two ways: first, there is alcoholic poisoning through the milk, which tends to stupefy the infants, and predispose them to death; and, secondly, the semi-intoxication of the mothers throws them into a stupor, in which they lie upon and suffocate their children. It is as important as ever that these perils, incident to the practice of heavy drinking on Saturday nights, should be generally moderated.

## PATHOLOGICAL SOCIETY OF LONDON.

WE remind our readers that the debate on Rickets will be opened on Tuesday next by Dr. C. Hilton Fagge. Drs. Barlow and Lees will also make a communication to the Society on the same subject, and Drs. Crisp and N. Moore are expected to take part in the debate, which will probably be adjourned to the next meeting of the Society. It is hoped that living and recent specimens will also be exhibited on the evenings specially devoted to the debate.

## ROYAL COLLEGE OF PHYSICIANS.

THE Lumleian Lectures will be delivered this year by Dr. Reginald Southey—subject, "Bright's Disease"; the Croonian by Dr. Moxon, on the "Influence of the Circulation upon the Nervous System"; and the Gulstonian by Dr. Coupland, on "Anæmia." These lectures will be published in THE LANCET from the MSS. supplied to us by the several lecturers.

## THE NEW JUDGE.

IT may interest our readers to be told that Mr. Watkin Williams, the newly-appointed judge, many years ago diligently studied medicine and completed his curriculum at University College; he acted as house-surgeon under Mr. Erichsen, the present distinguished president of the Royal College of Surgeons.

## THORACENTESIS.

IN recent numbers of the *Gazette des Hôpitaux* is found a clinical lecture on Thoracentesis by M. Potain. He recommends the operation in all cases of empyema, and in all cases of serous pleurisy after fifteen to twenty days where purgatives and diuretics have failed to cause the absorption of the fluid. He urges that it should never be practised for hæmothorax, on account of the difficulty of deciding when the source of the hæmorrhage is closed, and the impossibility of removing coagula; nor in pleurisy complicating phthisis with large cavities; but the early or middle stages of tubercle he regards as no bar to the operation.

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THE Examinations at Oxford for the degree of Bachelor of Medicine will commence in the Medical Department of the Museum as follows:—The First (or Scientific) Examination, November 29th. The Second (or Final) Examination, December 6th. Candidates for either of these examinations and candidates for the certificate in subjects bearing on Preventive Medicine and Public Health should send in their names, on or before Nov. 15th, to the Regius Professor of Medicine, Medical Department, Museum.

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AT the next quarterly meeting of the British Medical Temperance Association, to be held in the Medical Society's Rooms, Chandos-street, Cavendish-square, on Tuesday, Nov. 16th, 1880, at 4 P.M., the President, Dr. Richardson, will give an address on "Alcohol as an Antispasmodic—a Clinical Survey." "Exhibit: The Adulterants of Gin."

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FROM recent advices it would appear that cholera is prevailing rather severely in Upper India; the Toondla Rest Camp is said to have been closed in consequence. Some anxiety is felt lest the disease should extend to the large camp to be formed at Lahore during the Durbar.

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AMONG the new chairs to be established at Oxford, according to the "proposed statutes" drawn up by the University Commissioners, is a Waynfleet Professorship of Physiology, by Magdalen, when the revenues of the College will allow of it.

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MR. EVAN ROWLAND, M.R.C.S. Eng., who served the office of Deputy Coroner to the late Mr. John Maurice Davies for twenty years, was on the 3rd inst. elected Coroner for the Aberystwith District.

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LORD ROSEBERY was on the 6th inst. elected Lord Rector of Edinburgh University by a majority of 36 over Sir Robert Christison, Bart., the Conservative candidate, who polled 985 votes.

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# Public Health and Poor Law.

## LOCAL GOVERNMENT DEPARTMENT.

### REPORTS OF MEDICAL OFFICERS OF HEALTH.

*Wandsworth.*—The reports of the medical officers of health (Mr. Kempster, Mr. Oakman, Dr. Nichols, Dr. Flowers Sutton, and Dr. Alexander Walker) for the several parishes in the Wandsworth district—namely, Battersea East, Battersea West, Clapham, Wandsworth, Streatham (including Balham and Tooting, and Putney and Roehampton), show, for the year 1879, an estimated population of 171,900, a birth-rate of 39·7 per 1000 inhabitants, and a death-rate of 20·5 per 1000, the death-rate for the whole of the metropolis being 23·3. The principal features in the returns of the causes of death during the year were the small mortality from small-pox, four deaths only having been recorded; the "remarkable" decrease in the mortality from diarrhœa, attributed to the low temperature of the year; and the considerable fatality from diseases of the respiratory organs, constituting probably a third of the whole mortality of the district. "This heavy loss," say the reporters, "was no doubt due to the intense cold of the winter, both at the beginning and end of the year; and to the amount of rain which prevailed during the entire year." The following summary of the social position of the persons who died is of interest:—Nobility and gentry 3·3 per cent.; professional class 5·9 per cent.; middle-class 17·4 per cent.; industrial class 73·4 per cent.

The number of inquests held in the district during the year formed 3·7 per cent. of the total deaths, as compared with 4·2 and 5·0 per cent. in 1878 and 1877 respectively. On this it is observed: "We confess we do not find much satisfaction in this reduction of inquests, when we find that no less than eighty-nine persons died and were buried without attendance, certificate, or inquest. The number of deaths so summarily disposed of increases year by year, while the number of inquests steadily diminishes. No doubt a saving of time is effected to the coroner, and some expense avoided, by this economical arrangement; but is life rendered more secure, and crime made more difficult? The majority of these deaths are of children, and a large proportion of them are not even submitted to the coroner. Of these sixty-nine occurred in Battersea, nine in Clapham, six in Wandsworth, and five in Putney."

Wandsworth, it appears, suffers from an evil similar to that which so seriously affects Lewisham—namely, an inadequacy of the sewers to carry off storm and surface-water during rains such as were experienced in 1879. During the year regulations for the control of cow-houses were introduced, and are reported to have produced excellent effect. "The improvement in the dairies and cowsheds has been in some cases radical, necessitating rebuilding of the entire premises. We are certain," add the reporters, "that the regulations tend to improve the quality and purity of the milk by increasing the health of the animals, and to restore the confidence of the public in the use of one of the most valuable of our food supplies." Dr. Walker, the medical officer of health for Putney, observes on this subject: "The regulations admirably meet the wants of the milk trade, except in one particular—viz., the diseased condition of the cows. It is a fact of great importance that tubercular diseases are capable of being transmitted by cows' milk, and some sort of inspection of the condition of the animals should be instituted by qualified veterinary experts. Perhaps cows should be only allowed to be used until a certain age for dairy purposes, being then drafted to the slaughter-house." The Wandsworth district still suffers more or less from the piggery nuisance, but a number of piggeries were got rid of in the course of the year, and a hope is expressed that "the day is not far distant when the odour of a piggery will be unknown in the district." Hope also is expressed that the question of the water-supply of the district (as part of the greater question of the water-supply of the metropolis at large) has passed into a phase which will eventually lead to a supply from some other source than the Thames.

From the reports on the separate parishes of the district we gather that Mr. Kempster sees no evidence in his area of an injury to the health of young persons from the better education to which they are now subjected. Mr. Oakman attributes great success in the arrest of the progress of scarlet fever and measles to measures of disinfection, and he gives a noteworthy instance of the recklessness of builders in constructing new buildings. Investigating the conditions under which diphtheria prevailed in a family, it was found that the water-cistern had been placed immediately under the watercloset-pan, a layer of sawdust being spread over the cover of the cistern to soak up drippings from the closet, which was saturated. Dr. Walker comments upon the overflow of sewers, "the great fault of our modern sewage system," to which the parish under his charge is liable.

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### THE ARTISANS' DWELLINGS ACT.

A meeting of delegates from the Metropolitan Vestries and District Boards was held on the 5th inst. to consider a report respecting the Artisans' Dwellings Act, drawn up by a committee appointed on the 23rd January last, with a view to suggest for consideration such amendments in legislation on the subject as might seem desirable. The following were the conclusions of the report:—1. That no class of

citizens has a right to dwellings or sites for dwellings at the public cost; that only imperative considerations of public health can justify the outlay of the public money for such purposes as those of the Artisans' Dwellings Act; and if these considerations can be adequately provided for under Torrens' Act it is unjust to add to the heavy and constantly increasing weight of local taxation by enforcing the provisions of Mr. Cross's Act. 2. That owners of the class of property chiefly affected by these Acts should be placed under strong pecuniary inducements to keep it in proper and habitable condition; that if property has been kept in such a state as to be unfit for human habitation, or so as to become a nuisance, the penalty of such a course should fall upon the owners, and that the provisions of the Act should be vigorously applied whenever premises are in the condition contemplated by section 5, the Act of 1868, whether that condition has resulted from overcrowding, defective construction, the absence of sufficient area for light and air, or general dilapidation and uncleanliness. 3. That the working of the Artisans and Labourers' Dwellings Improvements Act, 1875, is impolitic and ruinously extravagant, and that in the interests of the ratepayers the provisions of the Acts known as Torrens' Act (1868-79) should be put in operation and fully exhausted by the local authorities throughout the metropolis before any further action is taken under Cross's Act. 4. That the cost of works under Torrens' Acts, whether executed by the owner or by the local authority, should be apportioned by the arbitrator between the parties holding the several freehold and leasehold interests, regard being had to their various responsibilities and the value of their interests. 5. That Torrens' Act, as amended, is capable of effecting most important results in improving and rendering healthy the habitations of the labouring classes in the metropolis, and that to this end it is desirable that each vestry and district board should adopt such measures by the appointment of standing committees, or otherwise, as may secure the prompt and effective working of the Act, and that if further powers be necessary in connexion with sanitary regulations, water-supply, or otherwise, it is desirable that such powers should be obtained without delay. 6. That the following amendments appear desirable in the Amendment Act. That section 5 be amended so as to limit the owner's power to require the local authority to purchase to cases in which the order of the local authority is to demolish the premises. That section 7 be amended by striking out the words "Local Government Board" in sub-section 1, and inserting in lieu thereof the words, "One of Her Majesty's principal Secretaries of State so far as relates to the metropolis." 7. That it will only be just and equitable that the compensation to be paid to the owners for acquiring lands should be a charge upon the whole of the metropolis, to be contributed by the Metropolitan Board of Works upon the application of the local authority. The other expenses to be paid by the local authority. 8. That it be recommended that all proceedings under the Artisans' Dwellings Acts 1875-9 be stayed until an opportunity has been afforded for a committee of the House of Commons to consider and report on the working of the Acts. 9. That it is desirable that a memorial to the Home Secretary should be prepared in accordance with the terms of this report, to be presented by a deputation at an early date, and that a copy of this report be forwarded to the Metropolitan Board of Works, with a suggestion that, if practicable, no fresh steps may be taken under Mr. Cross's Acts until such proposed inquiry has taken place.—A memorial prepared in conformity with these conclusions was read and adopted.

On the 8th inst. a meeting of the Council of the Charity Organisation Society was held to consider a report from a special committee appointed to examine the subject of artisans' dwellings in London. The committee reported to the effect that an amendment of the law was desirable, with a view of simplifying its operation; and recommended that a letter should be sent to the Home Secretary asking for the appointment of a departmental committee to make a searching and authoritative investigation into the causes of the delay, expense, and other evils that had attended the administration of the Artisans' Dwellings Act, and the sections of the Metropolitan Streets Improvement Acts (1872 and 1877) providing for the rehousing of persons displaced under these Acts.

## THE BATH SMALL-POX SCANDAL.

A report of a committee of the Bath Board of Guardians on the late epidemic of small-pox in the city, adopted by the Guardians at their meeting on the 20th ult., shows very clearly the neglect of the Urban Sanitary Authority of its duties during that outbreak. They appear to have shunted the duty of isolating cases upon the Board of Guardians, with the effect of causing part of the workhouse to be converted into a small-pox hospital, introducing the disease among the inmates, with the shocking result of infecting thirty-seven and killing five, and with the further not unimportant consequence of pauperising not a few patients. The actual number of patients admitted into the workhouse from without was not less than 140, and during the time these admissions were taking place the Urban Sanitary Authority—the Corporation of Bath—had an infectious-disease hospital of their own, situated not very distant from the workhouse, practically lying unused. The public are now asked to believe that the Corporation had "misconceived" their functions in respect to isolation! We have already had occasion to express our warm admiration of the way in which the Guardians came forward to make good the neglect of the Sanitary Authority, and we have avoided making any observations upon the manner in which their own special duties were performed under the circumstances, not wishing to appear to reflect upon a body of gentlemen who were placed under such unusual and difficult circumstances by the default of the Sanitary Authority. But the report now before us almost compels a reference to this particular subject. Isolation is but one cardinal element in dealing preventively with outbreaks of small-pox. Another cardinal element is the use of vaccination and revaccination in the infected localities. One of the most essential measures in steps taken for the purpose of arresting the spread of small-pox is the following up the cases as they occur by the vaccination and revaccination of the individuals residing in the same house with the patient or brought into contact with him, and this whether he be removed from the place and isolated in a hospital or not. Now the duty of securing this following up of the cases by vaccination rests with the Guardians, and the Local Government Board have issued very precise instructions as to the way it is to be performed. The reports we received at the time of the outbreak and immediately afterwards were remarkable for the absence of any reference to measures of this sort having been adopted in Bath; and the report now before us, although giving certain totals of vaccinations and revaccinations, makes no allusion to the execution of the measures advised to be carried out by Boards of Guardians under the circumstances of outbreaks of small-pox. The report, indeed, suggests that under the difficulties arising from the action of the Sanitary Authority with reference to the isolation of small-pox, and in their efforts to do the duties neglected by that authority, the Board of Guardians were compelled to deal imperfectly with their own special duties as to vaccination. We trust to learn that this was not the case.

It requires a robust faith in the principles of local administration not to have them seriously shaken as regards sanitary matters by this action of a local authority holding so high a position in the scale of municipal authorities as the Corporation of the ancient and wealthy city of Bath.

## THE METROPOLITAN WATER-SUPPLY.

An adjourned meeting of representatives of the Vestries and District Boards of London was held in the Vestry Hall, St. Martin's-in-the-fields, on the 3rd inst., to consider their further proceedings in the matter of the water-supply of the metropolis. The resolution passed at the previous meeting (see THE LANCET, Oct. 30th) had been forwarded to the Home Secretary, but he had declined to state what intentions the Government had with reference to legislation on the metropolitan water-supply next session, expressing his willingness to receive any representations that the delegates might be desirous to make on the subject. Whereupon a resolution was passed to the effect "that the meeting having received the reply of the Home Secretary, the delegates should address themselves to the question of the proposed Water-Trust; and that a sub-committee be appointed to prepare suggestions in reply to the Home Secretary's request, and to bring up a report for consideration." A committee of seven was appointed, and the meeting adjourned for a week—the intention being to offer these suggestions to the Government before the expiration of the time for Parliamentary notice.

### THE RESTRAINT OF INFECTION.

At a recent meeting of the City Commissioners of Sewers, Dr. Sedgwick Saunders, the medical officer of health, asked their attention to the following anomaly in sanitary legislation. There were three persons lying ill with scarlet fever in a house in Mansell street, Aldgate. The father was a journeyman tailor working in his own room. On the outbreak of the fever he (Dr. Saunders) ordered that no more clothing should be brought into the house. The result was that the man's livelihood ceased, and he had an offer of breaking stones in the union or starving. With aid from the Mansion House poor box the man had been able to tide over the emergency. Dr. Saunders pointed out to the Commissioners the hardship occasioned to a poor man in requiring him to absent himself from his vocation in order to protect his neighbours from contagious disease. To such a man the law offered no compensation; and Dr. Saunders suggested that the sanitary authorities, whose funds were drawn from the public rates, ought to have power to apply their funds to the support of those people who were thus isolated from the practice of their vocation through considerations of public health.

### PRIVATE MORTUARIES.

The Battersea Vestry has been instituting an inquiry into the private provision existing among undertakers in the parish for the custody of corpses previous to interment. Twenty-three undertakers' premises were inspected for the purpose of ascertaining the means they had at their disposal for the occasional care of corpses, and it appeared that three had private mortuaries, and nineteen take charge of corpses (if they receive them at all) in their shops, or in stables, or sheds. None of the undertakers knowingly take charge of the bodies of persons who have died of infectious disease. Mr. Whiteley, one of the members of the Vestry, on the report of the inquiry being presented, observed that he had twice attempted to obtain the sanction of the vestry for the erection of a public mortuary, and hoped shortly to have an opportunity of reopening the question. He thought it would be news to the Vestry as well as to the ratepayers at large that they already had twenty private mortuaries.

A protracted prevalence of scarlet fever in the village of Whittington was a subject of consideration by the Lichfield Board of Guardians, as Rural Sanitary Authority, at a recent meeting. The medical officer of health read a report on the subject, but after a desultory conversation it was allowed to drop, apparently on the ground that, as the persons attacked with the disease were only children, and that of the disease the weak alone died, energetic action on the part of the guardians was not called for. The chairman said that they were all greatly obliged to the medical officer of health (Dr. Monckton) for his report, but an appeal of that gentleman to the effect that if nothing was to be done with regard to Whittington the authority should turn their attention to Chase Town, where scarlet fever had broken out, appears to have been disregarded.

The Local Government Board has refused to constitute Bonchurch, in the Isle of Wight, an urban sanitary district, several of the inhabitants having recently memorialised the Board to this effect. It is understood that the Board is anxious to diminish rather than increase the number of sanitary authorities in the island, experience having shown that the inefficient sanitary administration of the island is largely dependent upon the too great number of its independent sanitary authorities. Dr. Ballard, of the Medical Department of the Board, has been recently engaged in an inquiry concerning the sanitary state and administration of the island.

A report has been presented to the Paddington Vestry by the medical officer of health on the alarming prevalence of scarlet fever and other fevers on the banks of the canal in the district, consequent, it is believed, on the foul condition of the water and the large accumulation of offensive mud in the channel. The vestry have instructed their solicitor to apply for an injunction to restrain the canal company from continuing the nuisance.

The Wandsworth District Board of Works have successfully prosecuted a builder for using mortar composed of mud and lime in the construction of certain houses. A fine of £3 was imposed, with £2 costs.

The Kingston Guardians have prosecuted an individual for neglecting to have his child taken to the public vaccinator for inspection on the eighth day after vaccination. The excuse made was that the child was indisposed at the time and unfit to be taken, but the magistrate refused to accept this explanation, and fined the defendant 15*s.* 6*d.*, including costs.

The outbreak of scarlet fever at Chesham, to which we have referred more than once in our previous numbers, is we learn dying out, and the sanitary authority propose to expend £16,000 in sewering the place. An application has been made to the Local Government Board for the loan of the money.

The new water-works at Doncaster, which have been completed at a cost of about £200,000, and have occupied six years in construction, were formally opened by the Mayor of the town a few days ago.

Dr. Ballard, of the Medical Department of the Local Government Board, has been engaged in investigating the outbreak of scarlet fever at Newlyn East.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality has been almost stationary during the past three weeks, but influenced by the unseasonably low temperature has exceeded the average for the time of year. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5442 births and 3258 deaths were registered last week. The births exceeded by 257, whereas the deaths were 17 below, the average weekly numbers during 1879. The deaths showed an increase of but 14 upon those returned in the previous week, and were equal to an annual rate of 22·7 per 1000, against 22·6 in each of the two preceding weeks. The lowest death-rates in the twenty towns last week were 15·6 in Portsmouth, 18·3 in Sheffield, 18·8 in Plymouth, and 20·5 in Birmingham. The rates in the other towns ranged upwards to 25·9 in Manchester, 26·1 in Leicester, 30·1 in Salford, and 30·3 in Liverpool. During the past five weeks of the current quarter the death-rate in these twenty towns averaged 22·2 per 1000, against 21·0 in the corresponding periods of the four years 1876–9.

The deaths referred to the seven principal zymotic diseases, which had declined from 1239 to 473 in the ten preceding weeks, further fell to 428 last week; of these, 150 resulted from scarlet fever, 78 from diarrhœa, 70 from fever (principally enteric), 50 from measles, 49 from whooping-cough, 24 from diphtheria, and 7 from small-pox. The annual death-rate from these seven diseases averaged 3·0 per 1000 in the twenty towns, and ranged from 0·7 and 1·9 in Plymouth and Sheffield, to 5·8 and 6·5 in Sunderland and Salford. The 150 deaths from scarlet fever showed a decline of 17 from the high numbers in the previous week, and the largest proportional fatality in Norwich, Sunderland, Oldham, and Manchester. Measles was most fatal in Salford, and whooping-cough in Portsmouth. The death-rates from enteric fever were proportionally excessive in Bradford, Leicester, and Portsmouth. The 24 deaths from diphtheria included 15 in London, 2 in Bristol, and 2 in Birmingham. All the 7 fatal cases of diphtheria were returned in London, where the prevalence of this disease again shows a tendency to increase. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 77 and 105 at the end of the two preceding weeks, further rose to 114 on Saturday last; the number of new cases of small-pox admitted to these hospitals during last week was 24, against 12 and 38 in the two previous weeks. The Highgate Small-pox Hospital contained 9 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 333 in the eight preceding weeks, further rose under the influence of the low temperature to 355, but showed no excess upon the corrected average number in the corresponding week of the last ten years; 220 resulted from bronchitis, and 92 from pneumonia. The annual death-rate from lung diseases was equal to 5·1 per 1000 in London, and to 8·3 in Liverpool.

Of the 3258 deaths in the twenty towns last week the

causes were duly certified by a registered medical practitioner or by a coroner in all but 75 cases, or 2·3 per cent. The proportion of uncertified causes of death did not exceed 1·3 per cent. in London, while it averaged 3·2 per cent. in the nineteen provincial towns, and was largest in Bradford.

### HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 24·2 per 1000, against 19·6 and 24·2 in the two preceding weeks, and exceeded the average rate in the twenty large English towns by 1·5 per 1000. The rates in the eight Scotch towns ranged last week from 17·5 and 20·6 in Perth and Aberdeen, to 25·5 and 28·4 in Paisley and Leith. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 107 and 149 in the two previous weeks, declined again to 115 last week; they included 54 from scarlet fever, 20 from fever, 15 from diphtheria, 15 from diarrhœa, 8 from whooping-cough, 3 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 4·6 per 1000 in the eight towns, and was 1·6 above the average rate from the same diseases in the twenty English towns. The zymotic death-rate in the eight Scotch towns ranged from 0·7 and 2·0 in Greenock and Aberdeen, to 5·6 and 6·3 in Glasgow and Edinburgh; scarlet fever showed fatal prevalence in each of the two last-mentioned towns. The fatal cases of scarlet fever in the eight towns, which had been 47 and 51 in the two preceding weeks, further rose to 54 last week, and included 30 in Glasgow and 19 in Edinburgh. The 20 deaths referred to fever, principally enteric, showed an increase of seven upon the number in the previous week; 13 occurred in Glasgow, 3 in Edinburgh, and 2 both in Leith and Perth. The 15 deaths from diarrhœa showed a marked decline from the previous weekly number. Ten of the 15 deaths from diphtheria occurred in Glasgow, and 3 in Dundee; while 4 of the eight fatal cases of whooping-cough were returned in Dundee. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 120 and 121 in the three preceding weeks, further rose to 127 last week; the annual death-rate from these diseases last week was equal to 5·1 per 1000 in the eight Scotch towns, against 4·6 in London.

### HEALTH OF DUBLIN.

The rate of mortality in Dublin again showed a marked excess last week. The annual rate of mortality in the city, which had been equal to 32·7 and 34·8 in the two preceding weeks, was 34·4 last week. During the past five weeks of the current quarter the death-rate in the city has averaged no less than 33·6 per 1000, against 21·0 in London, and 22·2 in Edinburgh. The 207 deaths in Dublin last week were within three of the number in the previous week, and included 36, or 17 per cent., which were referred to the seven principal zymotic diseases, corresponding with the number in each of the two preceding weeks; 13 resulted from scarlet fever, 9 from fever (principally typhus and enteric), 6 from diarrhœa, 6 from whooping-cough, one from measles, and one from diphtheria. No fatal case of small-pox has been recorded during the past fortnight. The annual death-rate from these zymotic diseases was equal to 6·0 per 1000 in Dublin last week, while it did not exceed 2·7 in London, and was 6·3 in Edinburgh. The fatal cases both of scarlet fever and whooping-cough corresponded with the number in the previous week, while those of diarrhœa showed a further decline. The deaths referred to fever (including typhus, typhoid, and simple), which had been 3 and 6 in the two preceding weeks, further rose to 9 last week; fever fatality in the city has been considerably higher during the past five weeks than it was during last quarter. The deaths of infants showed a further decline from recent weekly numbers, and the deaths of elderly persons were sixteen fewer than those in the previous week.

## HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

### TYPHOID FEVER IN QUEENSLAND.

An interesting report has been published by the Parliament of Queensland relative to the prevalence of typhoid fever at Toowoomba. It was held necessary to appoint a commission of inquiry on the subject, which was formed of Mr. Wm. Henry Groom, M.L.A., Dr. John Thomson, and Mr. John Garget. The results of the inquiry show with what lamentable success the grossest sanitary evils attaching to old towns in England have been reproduced at the antipodes. Toowoomba is a municipality containing from 700 to 800 dwellings. The filth of these is deposited in about 500 cesspits, and the water-supply is derived from 300 wells. Both cesspits and wells are hollowed in a porous soil, the well being the deeper of the two, and as a rule twenty feet only intervenes between a cesspit and a well. That the liquid contents of the cesspits percolate into the wells there can be no doubt. Dr. Howlin gave evidence to the effect that "after a heavy rain the water had risen in the closet [cesspit] to within two or three feet of the seat, and after a week the whole would disappear; and he further noticed that a good drink of water from the well (the water-supply of the house), though not nauseous to the taste, would bring on a sharp outbreak of diarrhœa." The surface of the ground was not less filthy than the subsoil, and this neglect of cleanliness extended to banks and offices, and even Government properties. The *gaol*, indeed, appears to have been the only place kept in decent order. Under conditions of this sort it is not surprising to find that during a prolonged drought Toowoomba has suffered severely from typhoid fever. The Commission attribute the outbreak to the drought lessening the supply of water to the wells, and this becoming in consequence proportionally more impure; the "total neglect of ordinary cleanliness," and to ignorance. Toowoomba has, in fact, to begin at the beginning of decent requirements for health preservation, and the Commission recommend the "proclamation" of the district under the Health Act, 1872; the nomination of a medical gentleman either as a member or an officer of the Local Board of Health, and the appointment of a qualified inspector; the total abolition of all cesspits and the substitution of the dry-earth system; the proper disposal of slop-water; the stopping of the present well-water-supply, and the immediate use of reservoir water or rain-water; the supervision of Chinamen's gardens, the banishment of all pigs from within the municipality; the registration of disease; and the instruction of the young at school.

### FEVER ON THE LOWER MISSISSIPPI.

A recent number of the United States National Board of Health Bulletin (vol. ii., No. 15) contains several interesting letters and reports on the subject of a prevalence of fever on the Lower Mississippi. The fever in question has given rise to wide differences of opinion as to its nature, and to a sort of disagreement between the State Board of Louisiana and the National Board. On the one hand, Dr. Steenberg and others representing the National Board, after personal investigation of the disease, have come to the conclusion that a mild form of yellow fever exists in addition to malarious fever connected with the rice-fields, and the National Board, guided by their judgment, have placed funds at the command of the State Board for use in instituting, as they think, necessary preventive measures against yellow fever. On the other hand, the medical advisers of the State Board, also after personal investigation, take a different view of the disease from the advisers of the National Board. They hold it to be solely a form of malarious, remittent fever, which is designated "rice-fever," and which has been increasing of late in prevalence on the Lower Mississippi contemporaneously with an increasing cultivation of rice in the lowlands. The State Board has accepted this conclusion, and declined the pecuniary assistance proffered by the National Board. The letters and papers deserve an attentive consideration.

### YELLOW FEVER ON AN ENGLISH SHIP.

The *Liverpool Daily Post* reports that information has been received in Liverpool of a terrible outbreak of yellow fever on board the London ship *Jorawur*. The news comes from Roseau, Dominica, and is dated the 2nd ult. The *Jorawur*, a fine vessel of 1736 tons register, was formerly H.M.S. *Vulcan*, but was afterwards converted into a merchant vessel. It appears that on the 10th of September she put into St. Kitts for water and provisions, being then on a voyage from Guadaloupe to Trinidad. Shortly after leaving Guadaloupe yellow fever broke out, and twenty men, including the captain, were attacked, four of them dying. The *Jorawur* had been thirty-two days out from port when she put into St. Kitts, having met with strong

adverse currents. At St. Kitts she was put in strict quarantine, and afterwards supplied with provisions and water. It transpired that on the voyage of the vessel from Calcutta to Guadaloupe there was serious mortality from yellow fever. She had on board 670 coolie emigrants, and twenty-seven of these died. The fever also attacked the crew, and eight men succumbed, making, with the four men who died on the passage from Guadaloupe to St. Kitts, a total mortality of twelve men of the crew of the unfortunate vessel. The *Jorawur* on leaving Calcutta had a crew of fifty hands, and when she reached St. Kitts they were reduced to thirty-eight.

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The Bangor Town Commissioners, at a meeting held on the 1st inst., adopted a scheme to supply Bangor with water at an estimated cost of £7000. Dr. Cameron of Dublin made an analysis of the water from Conlig, where it is proposed to obtain the supply, and has stated that the water is a good one. A sum of £3000 will also be expended in the sewerage of the town.

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ABSTRACTS OF THE

# INTRODUCTORY ADDRESSES

*Delivered at the Dublin Hospitals and Medical Schools, Session 1880–81.*

## ROYAL COLLEGE OF SURGEONS' MEDICAL SCHOOL.

MR. SWANZY, speaking of ophthalmic surgery, said it was a branch of the medical profession which required special attention, as was evident from the census returns, which showed that one in every 852 of the population was blind. No branch of the profession possessed such means of exact methods of diagnosis and treatment—in fact, it was the nearest approach to an exact science which medicine or surgery possessed. Each step in the study of ophthalmic medicine and surgery showed how intimate in many instances was the connexion of diseases of the eye with general constitutional disturbance; for example, with Bright's disease of the kidney, diabetes, locomotor ataxy, &c. Like others, he recognised the fact that the student was over-lectured. Already the students had to bear their old burdens in the curriculum along with some of the new, but they might look to the professors for any assistance in their power in the removal of difficulties that beset their progress. They were all aware of the unsatisfactory condition of the army and navy medical services, and more especially of the Indian Medical Service. In the latter, more particularly since 1864, the officers had to endure insults, disappointments, and breaches of faith on the part of the Government which no doubt had influenced students in refraining from joining that service until they had received some guarantee that they would be treated as educated gentlemen who served a country. At present the College had under consideration a new scheme of medical education. The College was worthy of the esteem it had enjoyed, and of the love and pride of its licentiates, and it would be so to the end of time if preserved from the dire calamity of a conjoint scheme. Though that was not the place to discuss the question, yet he could not help saying that if a conjoint scheme were adopted the College would become a mere ornamental institution.

## ST. VINCENT'S HOSPITAL.

DR. QUINLAN having alluded to the death of Mr. O'Leary, said that it was impossible to over-estimate the importance of clinical attendance in hospital, for without thoroughly studying disease at the bedside, they could never pursue their profession with safety to the public or satisfaction to their own conscience. No amount of reading or cramming could replace the careful personal observation in the wards, where, while so much appeals to the eye, the ear, and the other senses, still more is hidden from ordinary casual view, and is only to be appreciated by trained perception and patient inductive reasoning. The lecturer then referred to the ophthalmoscope, laryngoscope, spectrum analysis, microscope, &c., as aids to medical science; but while they carefully studied them, it would be a grievous error to rely unduly upon them, and to neglect the careful painstaking clinical observation of disease. The physician who relied on the former and neglected the latter was like Æsop's astronomer who fell into the pit while he walked along, his eyes fixed upon the stars, but unobservant of the common objects in the path on which he walked. It was hardly necessary to allude there to the importance of medical chemistry, for physiology and pathology were year by year becoming applied branches of it, and pharmaceutical chemistry was annually adding to their armoury remedies of the most potent character. He could not refrain from expressing his wish that chemistry, botany, and physics could be learned and disposed of at the preliminary examination, before the student entered upon his four years' regular medical curriculum. There was too much forced into the present four years' curriculum; and while something was being constantly added on (as recently ophthalmology and vaccination) nothing had been taken off. The tension was becoming too great, and the obvious remedy was the diminution of the lectures to one course in each department, except anatomy and dissections, in which there ought to be two separate courses—a junior and a senior. The lectures should be changed from mere professional discourses to half of demonstration and a remainder of catechetical examination, and no student should get a certificate who had not attended a proper proportion of the lectures, and at each satisfied his teacher as to his knowledge of the previous one. He had tried this double system with success. In conclusion, he impressed upon them to devote themselves from the very beginning to their hospital and school studies, beginning now to take so keen and deep an interest in the furtherance of medical science and education, and by the fact that the profession was now, through its accredited representatives, always consulted on questions of medical reform by each successive Government.

## MEATH HOSPITAL.

MR. HEPBURN having referred to the death of Deputy Surgeon-General Joshua Henry Porter, one of the brightest ornaments of the school of Irish surgery, next addressed his observations to those who had chosen medicine as their profession. Every facility would be afforded them to make the acquaintance of a practical knowledge of their profession easy to them. He often thought of those who then held the foremost rank in the hospital, and of whom, in the retrospect, we felt constrained to say, "There were giants in those days." But though their Graves, their Cramptons, their Stokes, their Porters, and other worthies had passed away—though those ancient great ones, who made so high a reputation for their hospital, were gathered to their fathers, the spirit which animated those great and good men, and which earned for them their high renown, has lived in their successors. If those mighty spirits of old could revisit the scenes of their former labours they would find an increasing body of intelligent, diligent, and high-toned medical students. In conclusion, students were not to suppose that idleness and dissipation were manly. There was no true manliness except in the honest performance of duty. What meant the monuments of Wellington, Nelson, and Gough, which adorned their city and park; had they been erected to do honour to individuals merely? No; but in order to keep alive in the hearts of each succeeding generation the virtues for which those heroes were distinguished. Duty, however, and the fear of God were the guiding principles of those great men, and they were influenced by those principles. If they, before whom life was just opening, were stimulated by the recollection of their noble deeds, he had no fear for their success in the profession they had chosen. He had not touched upon what might be called the burning questions of the day, which, in his opinion, were best reserved for occasions when discussion could be elicited; he had preferred rather to give them advice at the outset of their career as to how the golden opportunities presented to them in that hospital might be best utilised.

## MATER MISERICORDIÆ HOSPITAL.

MR. MADDEN especially directed his observations to those young men who were about to join the ranks, on the nature of the profession they had chosen, and the method by which they might prepare themselves for its responsibilities. Unlike other professions, medicine was cosmopolitan, and,

whenever learned, might be practised in all countries and under all circumstances in which men are stricken by disease or accident and seek to escape from death. No portion of medical training could for a moment vie with engaging students in the hospital, to which all other branches of medical education should be made subservient. Pupilage did not end on emancipation from the terrors of examination. These but guard the portals of that wide domain of science which the longest life would not suffice them to explore thoroughly. In Dublin they had up to that time escaped any permanent settlement of those erratic medical hybrids — the lady doctors, despite the encouragement afforded them by the Irish College of Physicians in their hopeless contest against Nature's laws. There were some masculine women, just as there were some effeminate men. Neither were good types of their kind, and it needed no serious argument to prove the futility of any attempt founded on such exceptional cases on the part of either sex to fill the place and assume the functions of the other. He who would worthily fill the office of a true physician should possess a heart attuned to sympathy with suffering humanity, as well as a mind stored with the science which ministers to its relief. He recommended the cultivation of some taste for literary pursuits, and especially for the ancient literature of their profession. Those young men about to commence the study of medicine might be congratulated on the near prospect of having a feasible system of University education within their reach. In the new Royal University they might hope to find an institution in which every Irish medical student might seek, and if worthy might obtain, the great advantage of a university stamp on his medical qualification.

## RICHMOND HOSPITAL.

MR. STOKES discussed some of the practical effects on medical and surgical science of the promulgation of the germ theory. A special interest attached itself now to this subject, as it had been the means of bringing about a revolution in surgical practice, which would be attended with as great, or even greater, benefits to humanity than even the discovery of Jenner. What it had done for surgery was already clear and defined, and he would be bold indeed who would fix the limits of what antiseptic surgery may yet do. In medical science the results were not yet perfectly tangible, but sufficiently so to prove that we are on the threshold of discovery of a therapeutic knowledge, to be made use of not merely for the cure, but also for the prevention of disease. The germ theory dealt simply with the competence of living organisms to produce the phenomena of disease, and did not necessarily take cognisance of the question whether or not organisms may originate *de novo*, and putrefaction had been proved beyond a doubt. The competence of germs to produce one kind of fermentation was admitted by all; but the competence of germs to produce the phenomena of disease was the special subject of discussion between the supporters and the opponents of the germ theory of disease. Referring to the loss they had sustained by the death of Sir Dominic Corrigan, the lecturer stated that even from his early boyhood Sir D. Corrigan was distinguished for zeal, earnestness, and assiduity, and his great success in after-life was mainly to be attributed to these qualities. Though not a voluminous writer, the contributions to medical literature of Sir D. Corrigan were, some of them, in truth, essentially classical. The outcome of close, diligent, and accurate observations, rendered fruitful by study, his contributions stood out in bold relief in the medical literature of this century as gems, the beauty and truthful lustre of which time could never tarnish. The present was a time in the history of the profession than which none was ever more important or critical. Never had public opinion been more or as much directed on it as at present, as evidenced by the deep interest now taken in all matters connected with sanitary science, in the efforts that have been made, and are being made, to reform professional examinations, in the fact of the universities.

## LEDWICH SCHOOL OF MEDICINE.

MR. BENSON having alluded to the death of his predecessor, Dr. Rainsford, said that there was no profession possessed of such versatility, none in which so much liberty of thought and action was allowed, as in Medicine. Every medical man worthy of his calling was an eclectic free to follow whatever line of action or investigation he might prefer, and bound only to succour the needy, to be present where there was disease or death. Were he to deal with the much-vexed question of medical education reform, he would have advocated a one-portal system for each of the three divisions of the kingdom, a minimum pass examination, held under Government, the passing of which was to be the *sine qua non* for registration, advising at the same time that the rights and privileges of the now existing schools, colleges, and examining bodies be so far unchanged that no student should be allowed to present himself for this examination until he had first obtained the double qualification from some of the recognised corporations—that, in fact, the student be allowed to study how he liked, and obtain his diplomas where he pleased, as at present, with this exception only, that it should not be possible for him to register until he had passed the Government, nor to present himself for this examination until he had obtained the double qualification. The tendency would then be to level up instead of down, and the only one to suffer would be the much-enduring student, who would have three instead of two examinations to pass; but the third being a repetition of the former would cause him little anxiety if he knew his work for the others. The lecturer concluded by referring to the uses of the ophthalmoscope as an aid to medical diagnosis.

## SCHOOL OF PHYSIC, TRINITY COLLEGE.

THE inaugural address was delivered by Dr. John Malet Purser, King's Professor of Institutes of Medicine. Dr. Purser, in the course of his remarks, referred to the improvements in the new Physiological Laboratory, and impressed upon his hearers the great importance of a knowledge of physiology in medical education. He also drew attention to the amount of lectures required at the present time for medical students, declared it was overdone, and sympathised with those present at the large number of lectures at which attendance was required.

## FILARIA DISEASE.

DR. PATRICK MANSON, of Amoy, in some "Additional Notes on Filaria Sanguinis Hominis and Filaria Disease," in the eighteenth issue of the valuable Chinese Medical Reports published by order of the Inspector-General of Customs at Shanghai, which has just reached us, continues the report of his extremely valuable and praiseworthy researches, and supplies additional evidence in support of the parasitic causation of Elephantiasis Arabum. Stimulated by the criticisms of the late Dr. Tilbury Fox, he specially set himself the task of gathering fresh proofs wherewith to meet the objections raised by that physician. It will be remembered that Dr. Fox argued that it was not proved that E. Arabum and lymph-scrotum are the same disease, but that the escape of *chyle* in the urine and into the scrotum probably marks quite a different condition of things from the ordinary effusion of *lymph* into the tissues. He said the chylous discharge might be due to filariæ or the adult nematoid, but its occurrence in the same subject with E. Arabum was merely a coincidence, just as chyluria and leprosy may coexist. To this Dr. Manson replies that it is at the outset a highly significant fact that the coincidence is not an infrequent but a common one, and he proceeds to add some very important new facts. From a consideration of six cases (met with in the course of nine months) of a "group of cases which belong strictly neither to pure elephantiasis nor to pure lymph-scrotum, but are either a combination of these diseases or the transitional stage of one passing into the other," he was struck by the fact that there was one feature common to all—viz., enlargement of the groin glands. On drawing off the lymph from these glands, he always found filariæ present, apparently old and moribund, though he could get none from the blood of the finger. But he also examined the lymph from the enlarged groin glands in a case of elephantiasis of the leg uncomplicated by any scrotal disease, and found filariæ both on the side affected and on the opposite side, though there were none in the blood. In

another highly interesting case of an "elephanto-œdematous" condition of the legs accompanied by transient fever, Dr. Manson discovered in an enlarged groin gland "one free filaria embryo and *eleven ova*," thus apparently establishing the fact that Filaria Bancrofti is oviparous.

Dr. Manson in former communications had remarked that the filaria embryos were often temporarily absent from the blood, and in the present paper he adds further important results. From a series of systematic examinations made every four hours, he found that "unless there is some disturbance, as fever, interfering with the regular physiological rhythm of the body, filaria embryos invariably begin to appear in the circulation at sunset; their numbers gradually increase till about midnight; during the early morning they become fewer by degrees, and by nine or ten o'clock in the forenoon it is a very rare thing to find one in the blood"; and he further made out that the same law holds good in the dog, though not to the same extent. In the light of his former discoveries, the adaptation of the nocturnal habits of the filaria to those of the mosquito is very suggestive.

The outcome of Dr. Manson's remarkable discoveries, made in a thoroughly scientific manner, with great persistence and expenditure of labour, and under many difficulties, in conjunction with those made by Lewis, Bancroft, and others, is summed up in the following conclusions, which we give in his own words:—

1. The parent filariæ live in the lymphatics; this is proved by their young and ova being found there, even when absent from the blood.

2. They do not live in the glands, but in the lymphatic trunks on the distal side of the glands. Lewis and Bancroft found them in tissues some distance from any gland.

3. They are oviparous.

4. The eggs are carried by the lymph current to the glands, and being too large to pass ($\frac{1}{150}'' \times \frac{1}{300}''$), they are arrested there till hatched.

5. After hatching, the free embryo passes along the lymph vessels, and enters the general circulation.

6. Resting in some organ during the day, it circulates with the blood during the night;

7. Whence the mosquito abstracts it, and acts as its intermediary host.

8. In certain cases the ova, or embryos, produce obstruction of the lymph circulation through the glands, either directly by their size, or indirectly by causing inflammation.

9. If the obstruction be partial, varicosity of glands and afferent lymphatics results, but by means of the anastomoses the lymph circulation is continued, carrying the embryos with it into the blood. Lymph-scrotum, or chyluria, or varicose groin glands, with hæmatozoa, are therefore the symptoms of partial obstruction of the lymphatics.

10. If the obstruction be complete, one or other of two things happens: (*a*) The accumulating lymph so distends the vessels that they rupture, and a lymphorrhagia results, which is more or less permanent. In this case the lymph does not quite stagnate, but being able to circulate, though in a retrograde manner, it remains fluid. The symptoms of this form of obstruction are therefore lymphorrhagia from scrotum or leg, varicose glands, and filaria embryos in glands, and perhaps in discharged lymph, *but none in the blood*. (*b*) If the lymphatics fail to rupture, there is complete stasis of lymph, and excessive accumulation in the tissues on the distal side of the glands; solidification of the glands and tissues and elephantiasis results. No embryos are found in the blood, as none can pass the glands, and the parent worm or worms probably die choked, so to speak, by the stagnant and organising lymph and their own young. Consequently, in pure elephantiasis, as a rule, no embryos can possibly be found in the blood or gland lymph.

Should these conclusions prove correct it is manifest that a remarkable discovery has been worked out; but still many facts press for solution, and of these some are as follow: Has the elephantiasis of Europe the same causation? As first steps in this problem, we know that filaria embryos have been discovered in the blood in England by Dr. Gabb, and we also know that dogs in France are largely the subjects of nematoid filariæ. Again, how is it that E. Arabum only occurs as a sporadic disease in Australia, where Dr. Bancroft discovered the parent filaria (probably introduced from Amoy by the Chinese)? And how is the curious inconstant co-existence of chyluria and E. Arabum in many countries explained, as, for example, the co-existence at Rio de Janeiro and not at Bahia, and the marked prevalence of lymph-scrotum in Lower Bengal?

## THE SERVICES.

### THE INDIAN MEDICAL SERVICE.

The Government of India have issued the following notification in the *Gazette*:—"With a view to afford medical officers of the Indian service employed on civil duties the opportunity of acquiring the latest experience of military medical administration before their nomination for promotion to the administrative grade, which nominations will be made at a date to meet as nearly as possible foreseen vacancies, the Governor-General in Council is pleased to notify that such officers, in the event of their not having performed military duty for six months within the three years immediately preceding the time of their probable promotion, shall, on nomination, be required to spend six months in medical charge of a native regiment at a station which is the head-quarters of a Deputy Surgeon-General, with whom they will be associated, in view to their acquiring a thorough acquaintance with the details of the office and the administrative system in force with British and native troops. An officer thus selected shall, when in charge of a native corps, relinquish the pay of his civil appointment, receiving in lieu that of an officer of his rank in medical charge of a regiment; but he will retain a lien on his civil appointment, to which he may, should he desire to do so, revert on the expiration of the six months, and await his turn for promotion. Officers, on proceeding to join regiments, and on reverting to civil duty, will be treated as officers on the military establishment, and travel under the warrants of their rank."

ARMY MEDICAL DEPARTMENT.—Surgeon-Major Alfred Malpas Tippetts to be Brigade-Surgeon, vice J. C. H. Wright, M.D., granted retired pay; dated 25th August, 1880. Surgeons-Major Charles William Griffith, Hunter Alexander Colan, and Benjamin Hinde, M.D., are granted retired pay, with the honorary rank of Brigade-Surgeon; dated 10th November, 1880. Surgeon William Henry Garde to be Surgeon-Major; dated 14th October, 1880.

ADMIRALTY.—Surgeon William Tait, M.B., to the *Royal Adelaide*, additional, for temporary service at Plymouth Hospital.

# Correspondence.

"Audi alteram partem."

## THE INFECTION OF PHTHISIS.

*To the Editor of* THE LANCET.

SIR,—A very important fact is brought under consideration by the remarks and cases of Dr. Thompson, published in this week's LANCET—viz., that it is clearly possible for a healthy person to be infected by inhaling atmosphere rendered impure by the breath of a phthisical patient.

Another point of importance is, the pathological changes produced by this infective process, and the possibility of rapid recovery thus in contrast with the ordinary tubercular process. There appears to be some doubt respecting the question, whether the pathological changes in one case could be fairly called tubercular, though having many of the characters of that condition. It matters little, however, from a practical point of view, whether the inhaling of a tainted atmosphere produces tubercular or pyæmic conditions. It may be assumed that they are both of serious nature, and probably that the tubercular condition may co-exist with the pyæmic in certain cases.

The inquiry naturally occurs whether a large hospital for tubercular phthisis would be so beneficial as one where the atmospheric conditions of required purity could be more easily preserved. It also occurs to me to ask whether in the treatment of tubercular or any other form of pulmonary disease which renders the atmosphere dangerous for the patient and those around him there is any plan better than others for purifying the atmosphere. It was with this view that I sent a short paper to the meeting of the British Medical Association last August; and assuming the possibility of atmospheric disinfection for sanitary and other purposes, I have been waiting to see whether others have been directing attention

to this subject. There are, no doubt, many like myself, who have followed closely the progress of the germ theory, and have already applied the knowledge possessed on the subject to the treatment of pulmonary phthisis, &c. The question of atmospheric conditions evidently takes precedence of others when considering the subject of the treatment of phthisis pulmonalis.

I am, Sir, yours truly,

Savile-row, Nov. 9th, 1880. ROBERT LEE.

## MUSIC AS A THERAPEUTIC AGENT.

*To the Editor of* THE LANCET.

SIR, — The experiments which are related in THE LANCET of October 30th, on the physiological action of music, are interesting as affording a scientific explanation of a very familiar fact. That music quickens the breathing and makes the heart beat faster is well known, and it is not difficult to infer that this results from stimulation of the centres, regulating the cardiac and respiratory functions. It is instructive to learn that strychnia increases whilst bromide diminishes the effect thus produced on the circulation, but this is precisely what might have been anticipated *à priori* from our knowledge of the action of these drugs on the nervous centres. That idiosyncrasy is apparent in the effect produced is also a matter of common observation. This is sometimes explainable, no doubt, by physiological peculiarities, as in the case of one of my relatives, who is, I believe, absolutely incapable of distinguishing any tune whatever. At other times the effect caused by musical sounds depends upon mental conditions, and is influenced by circumstances accompanying their production.

Whatever may be its mechanism, there is no doubt that music does exert a powerful physical action, and now that the fact is officially recognised by physiologists it may be well to call attention to the therapeutics of music, too much neglected, perhaps, at the present day. Pythagoras held that music might be made serviceable in the treatment of various diseases, and so have many generations of physicians down to our own time. "Music," says Esquirol, "acts upon the physique by determining nervous vibrations, by exciting the circulation. . . . . It acts upon the *morale* by fixing the attention upon sweet impressions, and by calling up agreeable recollections." "In the treatment of mental disease," says the same author, "I have constantly used music. It calms and soothes the mind, although it does not cure; it is, however, a precious agent, and ought not to be neglected." Pinel, who was no mean authority, also gives ample proof of its value in his classical treatise upon mental alienation.

At the present day concerts are a standard element of treatment in many lunatic asylums, but as usually conducted they may be considered to form part of the general hygienic and moral treatment, and to differ entirely from the therapeutic selection of various kinds of melody, according to the particular condition of the patient.

The use of music as a remedy may be truly said to date from the very origin of medicine. In one of his odes Pindar relates that Æsculapius himself so treated some of his patients, and the god's conduct seems to have been followed by his mortal successors. "The confidence of the ancients in the therapeutic virtues of music," says Fournier-Pescay, "was carried to a great length, and our present knowledge does not allow us to believe with Homer, Plutarch, Theophrastus, and Galen, that it can cure the plague, rheumatism, or the bites of reptiles. One is also obliged to doubt the evidence of Diemerbroeck, Bonnetus, Baglivi, Kircher, Haffenreffer, and Desault, concerning the cures which they attribute to music in cases of phthisis, gout, plague, hydrophobia, and bites of reptiles." If the word "reptiles" refers to the "tarantula," there is also high authority in favour of the opposite opinion. Speaking of the different means used to relieve the "tarantati," Hecker says that they were as nothing in comparison with the irresistible charms of musical sound. It was customary at the beginning of the seventeenth century for whole bands of musicians to traverse Italy during the summer months, and the cure of the "tarantati" in the different towns and villages was undertaken on a grand scale. The different kinds of "tarentella" were distinguished by different names, which had reference to the moods observed in the patients. "There was one kind of 'tarentella' which was called 'panno rosso'—a very lively impassioned style of music, to which wild dithyrambic songs were adopted; another called 'panno verde,' which was suited to the milder excitement of the senses caused by green colours, and set to Idyllian songs of verdant fields and shady groves; a third was named 'cinque tempi'; a fourth 'moresca,' which was played to a Moorish dance; a fifth 'catena.'" The score of one of these dances, from Athanasius Kircher's "De Arte Magica," will be found in the Sydenham Society's translation of Hecker's very interesting volume.

Burton, in his "Anatomy of Melancholy," has a chapter entitled "Music, a Remedy," which contains a sufficient number of quotations to serve for a treatise upon the subject. Burton's opinion was most emphatic. "Besides that excellent power it hath to expel many other diseases, it is a sovereign remedy against despair and melancholy, and will drive away the devil himself." Amongst the curiosities of past medicine may be ranked Porta's theory of the specific property of sounds emitted through different kinds of wood. He believed that instruments made with the woods of medicinal plants produced different kinds of music, endowed with therapeutic virtues in the same diseases as those for which the woods themselves might be used. In the early days of electricity a similar idea was embodied in the Italian method of "intonnacature," which consisted of the application of sparks to the body through a tube containing any medicinal agent which might be indicated, and which was supposed to "dynamise" the spark with its special force. Quite recently the properties of different kinds of woods have been again discovered by a Paris physician, who has enriched science with xylotherapy, and there is good reason to believe that the same enlightened capital will soon give the world a new electrical method which will be uncommonly like its Italian predecessor. Fournier-Pescay, who contributed the article "Musique" to the "Dictionnaire des Sciences Médicales," relates a number of cases benefited by the use of this agent, which cannot possibly be controverted. Amongst these are several which are worthy of mention. His own child was relieved of "constant pain" and insomnia by the sound of the flute, which was recommended, by the way, by Pliny for the cure of sciatica. Vocalisation in a minor key was afterwards substituted with good effect. Dodart (says the author) relates the case of a musician who was cured of a violent fever by the pleasure he experienced at hearing a concert in his room. Bourdois de la Mothe prescribed music as a last resource under the following circumstances:—A young lady was dying on the eighteenth day of a severe fever. The pulse was vermicular, the *facies* Hippocratic, and the extremities icy cold. Upon leaving the room, Bourdois caught sight of a harp, and it occurred to him to make the experiment. The husband's scruples gave way to the hope of saving his wife, and an excellent harpist was fortunately at hand. For thirty long minutes no change was observed, but ten minutes later the breathing improved, becoming deeper and quicker. The musician redoubled her efforts. A warm glow was diffused through the cold limbs, the pulse became more full and regular, and an epistaxis to the amount of eight ounces occurred, after which the patient recovered her speech. A few days later she was convalescent.

Desessarts, in a work published in 1811, relates similar cases, though of lesser gravity. It would be easy to fill pages with anecdotes of the effects produced upon individuals by the sound of music. Boyle speaks of a Gascon knight who was unable to hold his water when a certain instrument was played; and the same thing has been recorded of others. But the most remarkable observation, from a medical point of view, is related by Hallé, and quoted by Fournier-Pescay in the article already mentioned. A very sensible woman, and an excellent musician, could never hear her pupils play a certain piece, arranged for the piano and several harps, "without experiencing a uterine evacuation resembling the menstrual discharge."

Those who may wish to pursue the subject further will find plenty of information in the authors whom I have quoted, and particularly in Fournier-Pescay. There is an interesting account of the emotional effects produced in two elephants by different kinds of music, played as an experiment in their hearing, before a number of scientific men, at the Paris Jardin des Plantes; and, besides a mass of erudition and anecdote, there are also a number of clear directions as to the choice of suitable melodies for particular cases.

I am, Sir, yours faithfully,

Paris, Nov., 1880. OSCAR JENNINGS.

## "DENTAL SURGEONS," "SURGEON-DENTISTS."

*To the Editor of* THE LANCET.

SIR,—I trust that in fairness to the dental profession you will allow me to make some remarks upon Mr. Napier's letter in THE LANCET of to-day. Mr. Napier writes as though the Dental Act had for the first time conferred upon unqualified dentists the right to adopt the title Surgeon Dentist or Dental Surgeon, the truth being that they possessed this right, virtually undisputed, before the recent legislation. Attempts had been made some years previously to prevent them so styling themselves, but it was ruled by the higher courts of law that unqualified persons *bonâ fide* in practice as dentists might use these designations as they had used them unchallenged for generations; and an appeal to confirm a conviction in a test case—a very flagrant case—was literally "pooh-poohed" by the Lord Chief Justice. Further, it was found that there was the utmost unwillingness on the part of the Legislature to interfere with these "vested interests." It, therefore, became a question either of allowing in future an indefinite number of uneducated men to commence practice as dentists, or of permitting those already in practice to continue, and preventing the abuses for ever after. This latter the Dentists Act has done. It is still possible for the Legislature, in amending the faulty Medical Act of 1858, to introduce a clause forbidding under any circumstances the misuse of the prefix "surgeon;" and, I may be allowed to remind you, dentists are not the only offenders in this matter, for a quack styling himself surgeon-chiropodist or using a similar deceiving title cannot, in the present state of the law, be interfered with.

In conclusion, I must beg to state once more, in order to correct an important misapprehension, that the Association of Surgeons Practising Dental Surgery has no valid title to speak in the name of those it professes to represent. The majority of dental surgeons are not members of it; and at the time it was started its foundation was protested against in your columns by a large number of dental surgeons, comprising those whose scientific and other work has been mainly instrumental in placing dentistry in its present improved position.

I remain, Sir, your obedient servant,

Wimpole-street, Nov. 6th, 1880. HENRY SEWILL.

## GUY'S HOSPITAL.

*To the Editor of* THE LANCET.

SIR,—I cannot hope to stem the torrent of obloquy directed by your articles against the staff of Guy's until I show that it is undeserved; but I think it would have been more generous to have written in our aid than for our discomfiture. The withdrawal of an injudicious letter, however humiliating, may yet be wise, when it saves from dismissal two of our seniors. The withdrawal may be regarded as a defeat, but it is by no means an "unconditional surrender." There is, indeed, much yet to be done. I have shown elsewhere how strangely altered the governing body has become, under the process of self-election, from that which Thomas Guy appointed. It is now *vis consilii expers*. To obtain some alteration in the constitution of this body so as to prevent recurrent disaster, and to secure a fair representation of the profession in council, ought to be the endeavour of every one interested in hospital management. We are told that we represent the profession, and that it is humiliated. If so, whence should have come our support? Of the dozen medical schools in London which has moved to our assistance? Of the hundreds of teachers two only have taken up our cause.[1] The profession has looked on amused but not self-interested. It would see the hospital dismantled, the junior staff ruined, and four hundred students scattered to the winds before it would move a finger in our support. And further, we are assured on every side that there are hungry malcontents but waiting for the fall of a great reputation to rush in and plunder among the ruins.

I am, Sir, your obedient servant,

R. CLEMENT LUCAS, B.S.

[1] I refer to the generous letters of Mr. Brudenell Carter and Mr. T. Holmes.

## CALF LYMPH.

*To the Editor of* THE LANCET.

SIR,—Having had several calves placed at my disposal for the purpose of vaccination by a farmer friend, I have for the past three weeks been operating upon them and from them. I have most successfully vaccinated several children. The subject of animal vaccine being now to some extent before the profession of this country, I am desirous of using my present stock of calf lymph for the benefit of my brother practitioners; and it occurred to me that the best medium of effecting such a distribution would be through THE LANCET, as more medical men would get the opportunity of testing for themselves the effects of pure animal vaccine than if I gave my stock away amongst my private friends. I may state that I vaccinated my first calf from lymph procured from the animal vaccine establishment at Utrecht; and that all the steps of my progress are known to Dr. Buchanan, of the Local Government Board, and to Dr. Robert Cory, of St. Thomas's Hospital, the latter gentleman having kindly come down here and assisted me at the vaccination of two calves. I will be happy to send two tubes of lymph to any medical man desirous of using it, on his sending me a case to convey the tubes in, and a stamped addressed envelope; and, in conclusion, I must ask for a report of the success, or not, of the lymph from every person obtaining a supply.

I am, yours faithfully,

Manningtree, Nov. 9th, 1880. J. W. COOK, M.D.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a meeting of the Council, held on Thursday last, the minutes of the previous meeting were read and confirmed; Mr. Birkett was re-elected member of the Board of Examiners in Dental Surgery; and Sir James Paget's motion, to give up after September, 1881, the preliminary examination held by the College, was carried and referred to a committee to consider and report thereon. Mr. Holden's motion to discontinue the annual Report of the President on the affairs of the College was deferred.

# Obituary.

## DR. WILLIAM AITKEN,

DEPUTY SURGEON-GENERAL, MADRAS ARMY.

WE regret to announce the sudden death of Dr. William Aitken, at Douglas, Isle of Man, on Nov. 3rd, probably of heart disease, but more likely of apoplexy, as he had never complained of any cardiac symptoms, and was apparently in rude health up to the very moment of his death, which took place while he was sitting quietly reading a book in his chair about ten o'clock at night.

Dr. Aitken was born at Dunbar in 1819, and was therefore sixty-one years of age. He was a graduate of Edinburgh University, and for some time filled the chair of Midwifery in the Madras Medical College. He came of a family of doctors, for although his father was not one, three of his uncles were, and all of them were in the Public Services. Indeed, strange to say, the last of them died only, at the age of ninety-one, about ten days before him. That was James Aitken, of Talbot-square, who, after being fifteen years Master of the Mint at Madras, retired some fifty years ago, and was ever after a Government pensioner.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—In reference to a paragraph which appeared in our last issue, we are asked to state that two graduates of Christ Church, Oxford, were bracketed equal for the £125 scholarship—viz., Mr. George Greaswell and Mr. J. Holdsworth Fisher. Fourteen candidates presented themselves, of whom three were B.A. Oxford, three B.A. Cambridge, and six matriculated students of the University of London.

# Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on Tuesday and Wednesday last:—

Edwin F. Hatton, Toronto, Canada; Owen H. Evans and John S. Collins, Dublin; Francis R. S. Corser and Manley M. Fitzpatrick, Edinburgh; Herbert Owen, Stephen T. Salter, and R. L. Knaggs, Cambridge; Henry Mason, Glasgow; Archibald Watson, Paris; John W. McVitie and Rowland Owen, Liverpool; Frank Harrison, Sheffield; Charles D. Nuttall, David N. Ruck, Charles B. Meller, John T. Tupholme, Henry W. Dodd, and C. Richmond Benson, St. Bartholomew's Hospital; Edwin W. Reilly, Calcutta and Edinburgh; William P. O'Connor, University College; Charles J. Power, Cambridge and St. Thomas's Hospital; George W. B. Slader, Alfred P. H. Griffiths, James A. Marsden, Henry C. E. Cooper, Ralph H. Browne, and William W. Floyer, Guy's Hospital; Edwin Creighton, St. Thomas's Hospital; Aubrey S. Findlay, Middlesex Hospital; John Maye, London Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 4th:—

Bird, Ashley, Clifton, Bristol.
Burton, Charles Fred., New John-street, Birmingham.
Clatworthy, Herbert, Chatham, Kent.
Jenkins, Thomas Griffith, Colomendy, Ruthin, N. Wales.
Trevor, Henry Octavius, Nether Stowey, Somerset.
Wyllie, John, Cloughton, Scarborough.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Edalji Dorabji Patel, Bombay; Charles Watts Whistler, St. Thomas's Hospital.

MR. OLIVER PEMBERTON, F.R.C.S., of Birmingham, has been placed on the Commission of the Peace for the county of Warwick.

MR. EDWARD BATES, late Medical Officer for the Bonvilstone District of the Cardiff Union, has received a superannuation allowance of £30 a year.

A LATE attendant on the insane at Northumberland House, Stoke Newington, was last week fined £15 at Bow-street Police Court for wilfully neglecting a patient who committed suicide.

MR. EDWARD RODGETT, of Darwen Bank, Preston, has given the sum of £4000 for the erection of a detached infirmary in connexion with the Royal Albert Asylum, Lancaster. The occurrence from time to time of cases of infectious disease amongst the inmates of the asylum has drawn attention to the need of such a provision as the generosity of Mr. Rodgett has now supplied.

SANITARY INSTITUTE OF GREAT BRITAIN.—At a recent examination held by the Institute, seven candidates were present, and certificates were awarded to H. P. Boulnois, M. Inst. C.E., W. K. Burton, A. Harland, and C. Innes, M. Inst. C.E., who passed the examination for Local Surveyors; and a second certificate was awarded to A. Harland, who also passed the examination for Inspectors of Nuisances.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.—The following officers have been appointed for the session 1880-81:—President: George Johnston. Vice-Presidents: John T. Banks, Walter G. Smith. Council: J. H. Benson, F. Churchill, J. M. Finny, T. Fitzpatrick, A. Foot, S. Gordon, T. W. Grimshaw, R. J. Harvey, Thomas Hayden, H. Kennedy, J. W. Moore, J. M. Purser. Honorary Secretary and Treasurer: Alex. Nixon Montgomery.

UNITED HOSPITALS RIFLE ASSOCIATION.—On Wednesday, the 3rd inst., the first meeting of this Association took place at Wormwood Scrubs. The Association was formed last July for the purpose of uniting all volunteers of whatever corps, at the different hospitals, and improving their shooting by offering a challenge cup to be competed for annually by hospital teams. Three hospitals, Guy's, King's, and St. Bartholomew's, have already joined, and the treasurer has a large sum in hand for the cup. It is hoped that by next year the Association may be in so flourishing a state as to warrant an application to the U. R. A. for leave for the competition to be held at Wimbledon. The meeting on Wednesday attracted a large number of men, who were divided into three classes, marksmen, drilled members and recruits, Queen's ranges.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. Dunstan Leech, late of Witley, bequeathed £100 to the Cottage Hospital, Witley, £200 to the Guildford County Hospital, and £200 to University College Hospital.

SURGICAL SOCIETY OF IRELAND.—The following are the office-bearers for the ensuing session:—President: Alfred H. M'Clintock. Vice-President: Samuel Chaplin. Council: Edward H. Bennett, Philip Bevan, William Colles, Anthony Corley, Henry G. Croly, Edward Hamilton, J. S. Hughes, Archibald Jacob, Rawdon Macnamara, Edward D. Mapother, Humphrey Minchin, E. Stamer O'Grady, George H. Porter, B. Wills Richardson, Wm. Roe, Philip C. Smyly, Wm. T. Stoker, William Stokes, Wm. Thomson, Joliffe Tufnell, William Wheeler. Honorary Secretaries: Messrs. Richardson and Tufnell.

NATIONAL EYE AND EAR INFIRMARY, DUBLIN.—This institution will shortly be removed to Molesworth-street, where a suitable house has been obtained, which will give the necessary accommodation required when certain alterations and additions have been carried out. The new hospital will contain twenty-six beds, with separate day-rooms for men and women, operating-room, board-room, consulting-room, waiting-rooms, &c. The architect's plans have been approved of by the Managing Committee, but no works will be actually contracted for until the required money has been obtained, or a reasonable prospect of obtaining it exists. About £500 is still required.

THE ROYAL SOCIETY.—The following is the list of officers and council nominated for the year ensuing. The elections will take place, as usual, on St. Andrew's Day, November 30th:—President: William Spottiswoode, M.A., D.C.L., LL.D. Treasurer: John Evans, D.C.L., LL.D. Secretaries: Professor George Gabriel Stokes, M.A., D.C.L., LL.D.; Professor Thomas Henry Huxley, LL.D. Foreign secretary: Professor Alexander William Williamson, Ph.D. Other members of the council: William Henry Barlow, Pres. Inst. C.E.; Rev. Professor Thomas George Bonney, M.A.; George Busk, F.L.S.; Right Hon. Sir Richard Assheton Cross; Edwin Dunkin, V.P.R.A.S.; Alexander John Ellis, B.A.; Thomas Archer Hirst, Ph.D.; William Huggins, D.C.L., LL.D.; Professor John Marshall, F.R.C.S.; Professor Daniel Oliver, F.L.S.; Professor Alfred Newton, M.A., Pres. C.P.S.; Professor William Odling, M.B., V.P.C.S.; Henry Tibbats Stainton, F.G.S.; Sir James Paget, D.C.L.; William Henry Perkin, Sec. C.S.; Lieutenant-General Richard Strachey, R.E., C.S.I.

# Medical Appointments.

*Intimations for this column must be sent* DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BISS, C. T., M.B., M.R.C.P.L., has been appointed Assistant-Physician to the Middlesex Hospital.

BOYD, R. J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Assistant Medical Officer to the Cambridge, Isle of Ely, and Cambridge County Asylum.

BRODIE, W. H., M.B., C.M., has been appointed House-Surgeon to the Northern Infirmary, Inverness.

BURGESS, E. A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Clun District of the Clun Union.

CASE, P. W. P., M.B., C.M., has been appointed Assistant Medical Officer to the Infirmary of the Whitechapel Union, vice Gibson, resigned.

CLARK, A., M.A., M.D., F.R.C.P., has been appointed Consulting Physician to the North-West London Hospital, Kentish-town-road.

CUNNINGHAM, A., M.B., C.M., has been appointed Medical Officer to the Sydney District of the Chepstow Union, vice Tackwell, resigned.

EDWARDS, J. P., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer to the Workhouse of the Wolstanton and Burslem Union, vice Kendall, resigned.

FITZMAURICE, U., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to Listowel Workhouse.

GIBSON, J. H., M.D., M.Ch., has been appointed Medical Officer to St. John's-wood District of the St. Marylebone Union, vice A. J. Bell, resigned.

GILBERTSON, R., M.R.C.S.E., L.S.A.L., has been appointed Consulting Surgeon to the Cardiganshire Infirmary.

GRACE, H., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of Health for the District of St. George, Gloucester, for one year.

HADDOW, Mr. G., has been appointed Junior Clinical Assistant to the Glasgow Hospital and Dispensary for Diseases of the Ear, vice Mr. W. E. Violette, whose term of office has expired.

HARRIES, T. D., L.R.C.P.L., F.R.C.S.E., has been appointed Consulting Surgeon to the Cardiganshire Infirmary.

JONES, M., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Borough of Aberystwith, for one year. £50 per annum. Also Consulting Surgeon to the Cardiganshire Infirmary.

KEETLEY, C. B., F.R.C.S., has been appointed a Surgeon to the Surgical Aid Society, vice W. Allinghain, F.R.C.S., who has been appointed Honorary Consulting Surgeon, and also a Member of the Committee.

KNAPP, E. M., M.R.C.S.E., has been appointed Assistant House-Surgeon to the Bristol General Hospital.

MASTERMAN, G. F., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer to the Astley District of the Martley Union.

NEWMARCH, B. J., M.R.C.S.E., has been appointed Senior Resident Medical Officer to the Royal Free Hospital.

PAGE, F., M.D., M.R.C.S.E., has been appointed Surgeon to the Newcastle-on-Tyne Infirmary, vice Heath, resigned.

PORTER, J., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Town and Port of Fleetwood.

POWELL, R. D., M.D., F.R.C.P.L., has been appointed Physician to the Middlesex Hospital.

PRITCHARD, E. J., M.B., C.M., L.S.A.L., has been appointed Medical Officer to the Wolvey District of the Hinckley Union.

ROBERTS, J., M.R.C.S.E., L.S.A.L., has been appointed Consulting Surgeon to the Cardiganshire Infirmary.

ROBERTSON, Mr. J. C., has been reappointed Senior Clinical Assistant to the Glasgow Hospital and Dispensary for Diseases of the Ear.

ROSS, J., M.D., C.M., has been appointed Medical Officer to the Higher Hawes District of the Aysgarth Union.

SEARLE, G. C., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for Lower Brixham. £20 per annum.

SMITH, R., M.B., C.M., has been appointed Assistant Physician to Charing-cross Hospital.

VERNEDE, Mr. F. E., has been appointed Medical Officer of Health for the Poole Urban Sanitary District, vice Lawton, whose term of appointment has expired.

WALKER, J. S., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health to the Local Board of Smallthorne.

WITCHELL, Mr. G., has been appointed Medical Officer for the First "A" District of the Bedminster Union.

# Births, Marriages, and Deaths.

## BIRTHS.

COOKE.—On the 6th inst., at Henley-on-Thames, the wife of J. Benson Cooke, L.R.C.P., L.R.C.S., prematurely, of a daughter (still-born).

COTTON.—On the 24th ult., at Abingdon-street, Northampton, the wife of George Cotton, M.R.C.S.E., of a daughter.

CROSS.—On the 1st inst., at Stanhope-terrace, Regent's-park, the wife of John Cross, M.D., of a daughter.

GURDON.—On the 31st ult., at Hopton, Thetford, the wife of Edwin J. Gurdon, L.R.C.P.Ed., of a son.

SKIMMING.—On the 8th inst., at Tudor Lodge, East Molesey, Surrey, the wife of Robert Skimming, M.D., F.R.C.S.E., of a son (still-born).

## MARRIAGES.

BLAND—ROME.—On the 3rd inst., at St. John the Baptist's Church, Enderby, Leicestershire, William Charles Bland, M.R.C.S.E., of Milton, Southsea, Hants, to Emma, youngest daughter of the late Joseph Rome, of Groundslow, Staffordshire.

BRANDER—CLAY.—On the 23rd Sept., at Murree, Punjaub, Edward Salisbury Brander, M.B., F.R.C.S.E., Surgeon, Bengal Medical Staff, second son of Colonel M. J. Brander, Bengal Staff Corps, to Minnie Edith, third daughter of Major-General E. Bertie Clay, late Bengal Staff Corps.

DICKSON—SHAW.—On the 2nd inst., at St. John's Church, Worksop, Edward Dalzel Dickson, M.D., M.R.C.P., Physician to the British Embassy, Constantinople, to Lucy Lillias Martha, youngest daughter of the late Charles Shaw, of Malta.

FOTHERGILL—HAMMERSLEY.—On the 4th inst., at St. Thomas's, Marylebone, J. Milner Fothergill, M.D., to Adelaide Beatrice, younger daughter of William H. Hammersley, Esq., of Bridge House, Staffordshire.

HUNTER—BLACKWOOD.—On the 10th inst., at Burnbank-terrace, Glasgow, Walter Hunter, M.B., C.M., of Nottingham, to Annie Pollock, youngest daughter of the late William Blackwood, Esq., of Glasgow, and niece of Dr. Pollock, of Springbank, Newton-Mearns, Renfrewshire, N.B.

## DEATHS.

AITKEN.—On the 3rd inst., very suddenly, at Derby-terrace, Douglas, Isle of Man, William Aitken, M.D., Deputy Surgeon-General, Madras Army (Retired).

ANDERSON.—On the 7th inst., at York-place, Portman-square, Alexander Anderson, M.A., F.R.C.S. (by examination), in his 77th year.

BOOTH.—On the 3rd ult., at Barnfield House, Oswaldtwistle, John Booth, M.D., of Oswaldtwistle, Lancashire, aged 34.

CARRINGTON.—On the 29th ult., at Dunkeld, Athole, Forbes Carrington, M.D., of Dunkeld, and Sutherland-gardens, W.

GILES.—On the 23rd ult., at his residence, East India Dock-road, Limehouse, William Giles, M.D., aged 59.

MERTON.—At Clarges-street, Mayfair, Edward Meryon, M.D., F.R.C.P., aged 71.

WALKER.—On the 7th inst., at Netherwood-road, West Kensington-park, W., Henry Read Walker, M.R.C.S.E., third son of the late Sanderson Walker, M.D., of St. Michael's, Azores, in his 51st year.

**N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.***

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET OFFICE, November 11th, 1880.

| Date. | Barometer reduced to Sea Level, and 32° F. | Direction of Wind. | Dry Bulb | Wet Bulb | Solar Radiation in Vacuo | Max. Temp Shade | Min. Temp | Rain fall. | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Nov. 5 | 29·27 | W. | 35 | 35 | .. | 48 | 32 | .. | Foggy |
| „ 6 | 29·41 | W. | 45 | 41 | .. | 52 | 34 | .. | Foggy |
| „ 7 | 29·41 | S.W. | 47 | 45 | 61 | 54 | 43 | .. | Bright |
| „ 8 | 29·29 | N.W. | 47 | 44 | 72 | 50 | 44 | 0·12 | Cloudy |
| „ 9 | 29·24 | N.W. | 33 | .. | .. | 46 | 30 | .. | Foggy |
| „ 10 | 29·04 | N.W. | 47 | 43 | .. | 53 | 31 | .. | Foggy |
| „ 11 | .. | W. | 50 | 40 | .. | 53 | 42 | .. | Raining |

# Notes, Short Comments, and Answers to Correspondents.

PUNCTURE WOUND OF KNEE-JOINT SUCCESSFULLY TREATED WITH COLD AFFUSION.

DR. A. H. NEWTH, of Hayward's Heath, sends us a record of the following case:—"Mr. T——, while nailing a piece of wood to an upright support, which he steadied with his right knee, accidentally drove the nail into the joint to the extent of an inch. The wound was on the inner side just below the patella. There was intense pain both on movement and pressure around the joint. He was seen at once, and carbolic spray, with ether, applied for a short time. The joint was covered with lint dipped in weak carbolic-acid solution, occasionally renewed. Over this a stream of ice-cold water flowed constantly. The treatment was continued for four days. At the expiration of this time all inflammatory action had subsided, and, beyond a slight stiffness, the patient suffers no inconvenience."

*Dr. W. H. Rollins*, (Boston, U.S.A.).—The paper will appear in an early number.

MR. C. C. WHITEFOORD.

*To the Editor of* THE LANCET.

SIR,—On the 31st ult. a representative of the press reporting for the Coroner's Court in Central Middlesex called at my residence, and, expressing surprise at my continued existence, informed me that my name was on the coroner's list of inquests for the following day.

As various reports of my "death" had appeared in certain papers, I took the opportunity of retaining the services of my visitor to contradict the report generally, he undertaking to call upon and communicate with all the morning and evening papers, while I supplemented his action by writing autograph letters, acknowledgments of which I enclose for your perusal.

I have during the past week been the recipient of much correspondence and of many kind inquiries, and even of hysterics from hysterical subjects, and (to descend from the sublime to the ridiculous) of circulars from advertising undertakers and funeral contractors; but it was on the 6th inst. that I was interviewed by a gentleman about to establish himself in medical practice in London, whose attention had been called by a mutual friend to a notice of my death inserted in THE LANCET, and whose visit to me resulted from an inference being drawn that "a genuine bonâ-fide death-vacancy medical practice" would be "for disposal."

May I so far further encroach on your valuable space as to state that I have since my reported "death" attended three ladies of my *clientèle* in their accouchements, receiving from the husband of one, in addition to my fee, an honorarium of one guinea.

I remain, Sir, your obedient servant,

Albany-street, Nov. 8th, 1880. C. C. WHITEFOORD.

FISH-EATING AND LEPROSY.

THE publication of several letters on the above subject is unavoidably postponed till next week.

*H. A.*, (Liverpool.)—The card is, of course, very objectionable; but no good purpose would be served by reproducing it in our pages.

*E. H. M.*—Application had better be made direct to the Secretary of the Senatus Academicus.

*W. A. M.*—We do not name particular physicians or surgeons.

THE DRAINAGE-TUBE IN PLEURITIC EFFUSION.

*To the Editor of* THE LANCET.

SIR,—May I make an addition to your report of the meeting of the Medical Society on the 1st inst.? I am reported to have said that my "plan was to insert a drainage-tube should the second tapping be followed by return of the effusion." I wish to add that this only applies to cases of empyema, as I would not advise the use of the drainage-tube so long as the fluid remains merely sero-fibrinous.

I am, Sir, faithfully yours,

Queen Anne-street, W., NOV. 1880. F. DE HAVILLAND HALL.

### BILE AS A PRESERVATIVE.

A WRITER in the Louisville *Medical Herald* offers the following remark on this subject:—"Five years ago I had for microscopical examination a sample of albuminous urine, which contained bile and large quantities of tube-casts and renal epithelium. The renal derivatives were so numerous and so beautifully coloured that a drop of the sediment was placed on a slide and covered—a ring of cement run round,—intending to use it as a temporary mount for class-demonstration. The casts &c. remain perfect to this date. Would not iodised serum to which a small quantity of bile has been added prove a good preservative and colouring agent for organised products of this kind?"

### "A NOTE ON INTENTION IN THE DETERMINATION OF SEX AND OF THE MENTAL AND PHYSICAL INHERITANCE OF CHILDREN."

*To the Editor of* THE LANCET.

SIR,—I am thankful to "A. G. P." for affording me an opportunity, by your favour, of supplying one or two omissions in my recent paper on the above subject. The question of multiple pregnancy to which he alludes was not treated by me, because I was anxious to avoid trespassing on your space to the extent necessary for a discussion of details. I cannot now venture to do more than indicate the data from which my general inferences are deduced. First, let me say that nothing is more unreasonable than to assume that multiple pregnancy and birth implies multiple conception. As a matter of fact, there is commonly an appreciable difference in the size and—though less obviously—in the development of children born at the same period, which seems to point to a difference in their actual age. This is nearly always noticeable when twin-children are of different sex. Meanwhile it is quite consistent with my interpretation of the law governing sex to suppose that the energy of the one parent may be called into action by the ardency of the other, and that the force which determines sex may, consequently, proceed first from one side and then from the other. At the same time I doubt whether well-authenticated cases of multiple pregnancy, with the birth of children of different sex, after a single conception exist. In the majority of instances twins are of the same sex, and generally female. My own total experience in midwifery, counting only cases in which I have noted the sex of the children, does not greatly exceed one thousand cases, an obviously insufficient number to go upon, considering the comparatively small proportion of twin births—little more than one per cent.,—and the circumstance that I have only seen two cases of triplets; but I believe the statistics of obstetric practitioners will bear out my conclusion. I will not do more than throw out the query whether there is *any* instance on record of twins of different sex with a really single placenta? It would not upset my hypothesis if cases of this nature could be adduced; but I doubt if they can. The fusion of two ova is clearly possible, though independent development from two is more probable, and commonly occurs.

I should like to embrace this opportunity of supplementing my general statement as to transmission and heredity made in the paper which appeared in your columns on October 23rd, by saying that I most firmly believe in the communication of mental impressions by the female. In a paper on "Ideation in Utero," which you allowed me to place before your readers on Dec. 16th, 1876, I submitted that mental processes of thought and feeling taking place in the mother during pregnancy affect the child, probably by impressing the molecules of the fœtal cerebrum, by way of nutrition through the maternal blood. I am more than ever convinced of the accuracy and practical importance of that hypothesis. I will now add that the reproduction of characteristics resembling those of the father in the son is in a large measure effected through the agency of the female. Where there is strong affection on the part of the mother for her husband, his likeness, physical and mental, is as it were impressed on his son through the agency of the mother's psychic force—to use a term which stands for, rather than expresses, an unknown potentiality: a force which undoubtedly exists, although we cannot define it, and which plays a prominent part in the propagation of the species. This is a consideration which should be recognised; it explains many of those "exceptions" which actually prove, though they seem to detract from the authority of, the rule. The "feeling," impulse, or sentiment which pervades the mind of the mother does certainly control or influence the development of the child. Peculiarities of feature and form that impress her powerfully, whether with admiration or abhorrence, are therefore likely to be reproduced in *her* offspring; and if her mental conceptions are peculiarly strong, the impression may be transmitted in exaggerated intensity. The same result will thus follow the working of love or fear. These things happen commonly in the case of the male child, which is in a special sense the mother's. The likeness which female children bear to their male parents is the direct effect of reproduction in kind. The maternal influences are less evident in a female than in a male offspring.

The practical bearings of this subject are obvious. First, the probable influence of intention in the determination of sex is in itself of moment to the happiness of families and the good of the community. Second, there is the opportunity offered of suppressing, and perhaps progressively extinguishing, hereditary disease, by the selection of a sex unfavourable to the development of such disease.

Yours obediently,

Welbeck-street, Nov. 1880. JOSEPH MORTIMER GRANVILLE.

*M.B.*, being a private practitioner, and in no way connected with the Poor-law authorities, is, we think, entitled to his guinea for examining a supposed lunatic and certifying. A letter should be addressed to the Clerk of the Board of Guardians, and failing a satisfactory reply, application should be made to the Secretary of the Local Government Board, Whitehall.

*Mr. Roberts*, (Buckhurst Hill.)—We deem it inexpedient, as a rule, to comment on newspaper reports.

### THE BRITISH MEDICAL TEMPERANCE ASSOCIATION AT BRISTOL.

*To the Editor of* THE LANCET.

SIR,—Your correspondent, "Temperance," is somewhat unfortunate in his attempt to show "the utter untrustworthiness of the statistics set forth to show the advantage of total abstinence over even temperance," seeing that those to which he refers are perfectly correct. I may be allowed to explain, for the benefit of your readers, that these and other like facts were embodied in a paper which I had the honour of reading last month at a meeting of medical men in Bristol, which paper has been printed by the National Temperance League, 337, Strand, W.C., under the title, "What shall Medical Men say about Alcoholic Beverages?" price 1*d*. Anyone interested can see in that paper the figures in question, with several others. I derive no profit from its sale.

As the matter is of far deeper importance than the mere establishment of my *bona fides*, I should be glad of the opportunity of showing the error into which "Temperance" has fallen through imperfect knowledge. If he will refer to Parkes's Practical Hygiene, first edition, p. 469, he will find the following table of the mortality among the adult *male* population from 16 to 70 (all but an insignificant number of those in benefit clubs are between these ages):—From 16 to 20, ·720 per cent.; 21 to 30, ·974 per cent.; 31 to 40, 1·110 per cent.; 41 to 50, 1·452 per cent.; 51 to 60, 2·254 per cent.; and 61 to 70, 4·250 per cent. The average mortality from 16 to 70 being, therefore, 17·94 per 1000, or 1 in 55. If the ages 16 to 60 be taken (and this will probably include 90 per cent. of the members), then the average mortality is 13·02 per 1000, or 1 in 76. When it is recollected, further, that the members of benefit clubs are picked men, it need not be a matter of surprise that there should be in a certain club a mortality of 9·9 per 1000 in the course of ten years, and in another, during eight years, of 7·09 per 1000, or 1 in 141.

It should be remembered, also, that in all benefit clubs a certain number lapse from membership from various causes as time goes on, and when their increasing age would raise the average mortality; on the other hand, there are always young healthy men coming in to lower the mortality. Any difference, however, in the mortality of two clubs in which all the conditions, except as to their drink, are the same, will enable us to ascertain what influence alcoholic liquors exert. Even if the whole difference may not be due to one cause, yet I think there is sufficient evidence to show that the *tendency* of alcoholic liquors is to injure health and shorten life, and this conclusion becomes enormously strengthened by the multiplication of instances in which a low death-rate is coincident with total abstinence, and still more when this is found in every case where sufficient numbers and time are taken.

There is further confirmation of this kind beyond that previously given. I have before me the last three annual reports of the National Division of the Sons of Temperance for 1878-80 inclusive. The average membership was 14,028, and the deaths of members in these years were 97, 120, and 129, average 115—that is, 8·2 per 1000, or 1 in 121. Moreover, we have Government statistics respecting our soldiers. Dr. W. B. Carpenter long ago published the Government returns of the mortality in the Madras army in 1847, in which the deaths of intemperate soldiers were 44·56 per 1000; of the temperate, 22·15 per 1000; and of the abstainers, 11·11 per 1000. Allowing for difference of climate, this mortality of 1 in 90 is parallel with the other instances.

In a few months there will be published the first quinquennial report of all Friendly Societies registered under the Friendly Societies Act, in which all the statistics will be strictly comparable, and in which the average age of the members in each Society will be given. This last item of information is the only unknown point about the statistics I have given; but it is highly improbable that there is any such great difference between the abstaining and non-abstaining Societies in this respect as greatly to alter their relative position, and it may be confidently expected that the returns, when published, will clearly demonstrate the immense superiority, as regards health and longevity, of a total-abstaining over a non-abstaining community.

I am, Sir, yours obediently,

J. JAMES RIDGE,
Hon. Sec., British Medical Temperance Association.

Enfield, November, 1880.

*Surgeon.*—The inquiry is too vague to allow of a specific reply. There is no book issued with the title mentioned.

*Dr. G. Harley* is thanked.

### BRONCHITIS COMPLICATED WITH DIARRHŒA.

*To the Editor of* THE LANCET.

SIR,—I not unfrequently meet with cases of acute bronchitis complicated with severe diarrhœa in teething children. I should be thankful if any of your readers would favour me with an effectual prescription for this formidable combination. Yours faithfully,

ALFRED BERNARD, M.R.C.S.

Queen's-road, Upton-park, Nov. 6th, 1880.

### TIME AS AN ELEMENT IN THE APPRECIATION OF MEDICAL SERVICES.

THE following significant story by a Dakota Territory medical practitioner is taken from the *Michigan Medical News*:—

"I was called at midnight to see a gentleman who had just returned from a late dinner, where, in hasty eating, he had lodged a large fishbone in his throat. I provided myself with an emetic, œsophagus forceps, and other paraphernalia designed to give him relief, and hurried off to him. I found him pacing up and down, with a look of intense distress and anxiety, occasionally running his fingers down his throat, and gagging. He told me in tones of despair that he thought it was all up with him, but begged me, if the least glimmer of hope remained, to proceed at once in my efforts to relieve him. He extravagantly declared that he would give a million dollars to have that fishbone removed. I assured him that such cases were frequent, and ordinarily not attended with much danger, before proceeding to carry out measures for his relief. His fears underwent some diminution on the strength of this, and he then declared that fifty thousand dollars would no more than repay the skill and art required to extricate the unwelcome intruder. I smiled, and proceeded to introduce the forceps, but after several efforts failed to grasp the bone. His fears again induced him to mention a fabulous sum as the meed of the service that would expel the object of his terrors. I then gave him the emetic; its depressing effects causing his generosity to rise again, barometer-like, to a very high pressure. In a little while the emetic disburdened him of the greater part of his dinner, and with it up came the fishbone. He gave a sigh and look of relief, and, solemnly looking toward me, said, 'Doctor, I would not have that thing in my throat again for five dollars!' My fee eventually resolved itself into the 'valuable experience' that the occasion afforded me."

*Post-mortem.*—If the friends distinctly refused their assent, such a proceeding is undoubtedly illegal; at the same time we question whether another practitioner should advise or initiate any proceedings in the case.

*Mr. Woods.*—We think the remonstrances might well have elicited a courteous reply; but the matter is not worth troubling about.

WE have received from St. John's, Antigua, a communication dated Oct. 25th, 1880, without a signature.

*Mr. W. H. Polter.*—We are not aware of the source of the statement quoted.

*Mr. James Hawkins* is thanked for his letter.

### "FEVER" STATISTICS IN MADRAS.

*To the Editor of* THE LANCET.

SIR,—A few days ago I had an opportunity of seeing the Memorandum of the Army Sanitary Commission on the Health Returns of British Troops in Madras for 1878. With your permission I desire to make a few remarks thereon.

It appears to me that the value of the Memorandum is seriously diminished by the unsatisfactory statistics upon which it is based, and that there were good grounds for supposing, as I shall presently show, that there "has not been such an advance in the sanitary improvement of several of the stations as might have been expected."

In the Army Medical Department Report for Madras separate statistics for the several diseases constituting the group of "continued fevers" are not given; but seeing that only three diseases of this group—simple continued fever, febricula, and enteric fever—are mentioned in the Report, and that it is recorded that there were seven admissions for enteric fever, it follows that, after deducting these seven, the admissions for simple continued fever and febricula were 1935, or more than one-half of the total admissions (3812) for all diseases of the febrile group. Contrast this with the Bengal Presidency, in which the admissions for simple continued fever and febricula were about one-fourth, or 6434 out of 23,508; and with Bombay, in which the admissions for these two diseases were less than one-seventh, or were only 1274 of the total (8625) for the febrile group.

When contrasting Madras with the other Presidencies in respect to the occurrence of enteric fever, it is curious to observe the almost complete absence—only seven cases—of enteric fever from the disease returns of the Madras army. This seeming immunity can, I think, be very satisfactorily accounted for, as will be explained further on.

The longer I remain in India, and the more opportunities I have of observation, I am becoming more convinced that the indiscriminate use of the classification "simple continued fever" is open to grave objection. I have known where more than one-half of the admissions for all fevers were recorded as simple continued fever, and where on change of medical officers such name of a disease ceased to appear. I have also known the most malignant and fatal disease recorded as simple continued fever. This is a matter within the knowledge of Dr. Gordon.

I merely give these instances to show the laxity with which the designation is used. Instead of being a "refuge for cases of an uncertain character," I look upon the employment of the name "simple continued fever" as an indication, in the majority of cases, of an inexact and careless diagnosis. I have seen this name so often misused that I should be very much inclined to abolish it altogether from the Army Returns by the same means as Dr. Gordon so successfully used in respect to enteric fever in the Madras command—that is, by issuing endless and perplexing memoranda and circulars of directions, and calling for so many special reports as to make it almost impossible for a medical officer to record a case as enteric fever.

As regards the small number of cases—only seven—of enteric fever, it appears to me that the "very decided reduction" of Dr. Gordon can be very easily accounted for, and also the fact that the disease is only recorded as having occurred at two stations (Secunderabad and Kamptee) in the Madras command. What seems to me strange is that in the face of almost overwhelming opposition and difficulties any cases were recorded at all.

In order that you may form some conception of the difficulties and obstructions to be surmounted, I may mention that during 1878 Dr. Gordon issued eight circulars of directions to medical officers, covering eight and a quarter closely printed pages, on the subject of enteric fever; two of these were republications of circulars issued in 1876-77. The first required the medical officer in charge to institute a full and searching investigation into the history of the case, the direction of the investigation being indicated under six headings, with several subheadings. In this circular the printed directions alone covered two pages, with the exception of eight lines, and the special report was required *in duplicate;* this was afterwards changed to a single copy. In March another circular, with further directions, was issued. In July a circular of five paragraphs and several minor headings appeared with reference to the report on the eruption, and directed medical officers to "record precisely" what was required under the various headings. In August there were two circulars of further orders; one of these embraced twenty-two printed headings, and ordered that *in every case* considered as of enteric fever a return made out in "strict accordance" should be forwarded immediately on the termination of the case in recovery or death. In September two more circulars were issued. It might now be supposed that the climax was reached, but such was not the case. Early in the following January, 1879, another circular appeared, directing medical officers in future to furnish with their "special reports" a transcript from the case-book and a temperature chart. When it is taken into consideration that copies of all these special reports, &c. &c., have to be kept in the hospital books, and when it is considered how much time, worry, and unnecessary labour are involved in recording a single case of enteric fever, and that to comply with all the complicated instructions would almost fully occupy a medical officer's whole time, it will be easily understood how it is that enteric fever has practically ceased in the returns of the Madras army. I have been told by an officer of long standing that as long as Dr. Gordon was in Madras he would never record a case in his hospital as enteric fever. The statistics go far to prove that others were acting likewise.

It is earnestly to be hoped that the present enlightened administrator who is in charge of the health of the Madras army will, in the interests of the service, take an early opportunity of annulling such regulations. I look upon them as injurious in many ways. They render statistics valueless by practically preventing medical officers from recording diseases according to their knowledge and judgment, and they may be mischievous by tending to the absence of all those precautions which would otherwise be required to prevent the spread of infectious disease.

It is asserted that at no station in the Madras Presidency are there any *filth* causes capable of predisposing to enteric fever; but the Sanitary Commission (page 6) very wisely say that on this point other proof is required than mere assertion. I have served in the four divisions of the world, and I can honestly affirm that I have never seen filth approaching in any degree to what I have seen in the Madras Presidency. I can point out stations where the dry-earth system was not in existence, and where the air in the barrack-rooms was polluted by the effluvium from the exposed excreta. I can go further and point out where the ground was polluted by the burial of excreta in the immediate vicinity of the barracks. Years hence, when wells are sunk, as is not unlikely, in these very spots, the past history, if known, would account for any outbreak of disease that might otherwise appear obscure. I can also point out where collections of ordure were within one hundred yards of the barracks where a large European force was stationed. I have myself seen two cartloads of fresh human ordure, the stench in the neighbourhood being overpowering; yet with the existence of these, which are simple, unvarnished facts, to say that there are no filth causes is to me incomprehensible.

As regards the water-supply, I am pleased to see (page 9) that the Sanitary Commission do not accept its asserted purity. I have seen stations where the water-supply was most disgusting. It has often appeared to me that the difficulty of getting pure drinking-water was one of the chief causes of drunkenness in the army. This cause operates more in India than elsewhere, and, I believe, drives men to visit the canteen. I have no hesitation in saying that the attention given to the purity of the water, as far as I have had opportunities of judging, is, as a rule, wholly insufficient. I could point out where wells supplying troops are in the hollow at the sides of the public road, where the drainage of the locality passes in their vicinity, and where they are used in common by the native civil population. I could also point out where the most foul impurities existed beside them—at one station heaps of animal and vegetable filth, at another station one of the principal wells had within about thirty yards of it a large tree growing; under this tree, on the higher ground at the side of the hill, was the place where the filth carts of the station were deposited when not employed removing the night soil. I have seen the surface water running in, and no adequate protection from pollution.

I am, Sir, yours faithfully,

Sept. 17th, 1880. A. M. D.

SNOW-BLINDNESS.

DR. REED, of Detroit (says the *Canadian Journal of Medical Science*), claims to have cured snow-blindness by the administration of nitrite of amyl.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. G. Harley, London; Dr. Acland, Oxford; Dr. Mahomed, London; Mr. C. Lucas, London; Dr. de Havilland Hall, London; Mr. C. Heath, London; Dr. G. Thin, London; Mr. Bentham, London; Mr. Hulke, London; Dr. Althaus, London; Dr. Brailey, London; Mr. M'Call, Glasgow; Mr. Pollard, London; Mr. Bernard, London; Dr. W. Curran, Warrington; Mr. W. H. Brown, Leeds; Dr. Robertson, Huddersfield; Dr. Latham, Cambridge; Mr. Bradburn, London; Dr. Spencer, Bath; Mr. P. Smith, Shepton Mallet; Mr. H. Arnold, Liverpool; Dr. Keen, Philadelphia; Mr. M'Kinney, Mineral Ridge, Ohio; Dr. W. L. King, Fredonia; Dr. Allan, Glasgow; Mr. Folker, Hanley; Dr. Bowker, Sydney; Mr. Taunton, Winchester; Mr. Hawkins, Plymouth; Mr. J. Mann, Glasgow; Dr. Bayes, London; Mr. Leet, Liverpool; Mr. Hardy, London; Dr. Shepherd, London; Mr. Barker, London; Dr. Anderson, Dundee; Dr. A. Emrys-Jones, Manchester; Mr. Whitefoord, London; Mr. T. Woods, Gillingham; Mr. Boyd, London; Dr. Ridge, Enfield; Dr. Gee, London; Dr. Churchward, South Norwood; Mr. Sewill, London; Mr. Murphy, London; Mr. Clare, Handsworth; Mr. Roberts, Buckhurst-hill; Dr. Coleman, Surbiton; Dr. Ackman, Guernsey; Dr. Nowth, Hayward's Heath; Dr. Yeo, London; Dr. Cameron, Dublin; Dr. Sheen, Cardiff; Mr. Kesteven, Holloway; Dr. R. Lee, London; Mr. Fawcett, London; Mr. Bailey; Dr. Madden, Dublin; Mr. T. Bell, Uppingham; Dr. T. C. Fox, London; Dr. Daly; Dr. W. R. S. Jefferies, Isleornsay, Skye; Mr. J. Startin, London; Dr. Cook, Manningtree; Dr. Mundie; Dr. Thomas, Paddington; Mr. Anningson, Cambridge; Mr. Richardson, Burton-on-Trent; Mr. Sydenham, Bournemouth; Mr. Freeman, London; Mr. Whitaker, Derby; Miss Rosser, Southall; Messrs. Richardson and Co., Leicester; Mr. Ireson, Yaxley; Mr. Henry; Messrs. Harvey and Reynolds, Leeds; Mr. Churton, Painton; Mr. Frubshaw; Mr. Hughes, Horncastle; Mr. M'Connell; Mr. Mosse; Messrs. Roberts and Co., London; Mr. E. May; Mr. Smith, Halifax; Mr. J. B. Crozier, London; The Secretary of the Society of Arts; Medical Student; W. S.; Phœnix; Chirurgicus; E. H. M.; Coombe; Post-mortem; D.; Medicus; St. Helens; E. P. and J. P.; S.; X.; F.R.C.S.; M.B.; Surgeon; Alpha; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Whalley, Bradford; Mr. Scott, Newport; Mr. Horne, York; Mr. Woodall, Scarborough; Mr. Webb, Exeter; Mr. Shertliff, Kingston; Mr. Leaver, Stratford-on-Avon; Mr. Harrison, Sunderland; Mr. Benthall, Hartlepool; Mr. Wolfenden, Bolton; Mr. Walker, Crick; Dr. Corner, London; Mr. Morris, Swansea; Dr. Ridge, Enfield; Miss Cobb; Mr. Horder; Dr. Gurdon, Hopton; Dr. Jones, Coleshill; Mr. Cooke, Henley-on-Thames; Mr. Horrey, Manchester; Mr. Donaldson, London; Dr. Redwood, Rhymney; Mr. Boyce, Shrewsbury; Mr. Booth, Oswaldtwistle; Miss Porter; Dr. Jones, Bangor; Mr. Evans, Bromsgrove; Mr. Squire, London; Mr. Eltoft, Camden-town; Mr. Roberts, Alfreton; Messrs. Beddingfield, London; Cantab., Kineton; G. H., Chester; M.D.; C.M., Maryport; Beta; A. R. B.; H. F. E.; Surgeon, Kennington; R., Manchester; D. X.; C. J.; X. Y. Z., Newcastle-on-Tyne; P., F.R.C.S.; X. Y. Z., London; M.D., Greenheys; Delta, Manchester; C. G.; A. B., Watton; Medicus, Kirkham; S. K.; V. C.; Medicus; D. G. H., Southampton; C. H. B.; F.R.C.S.; Iricus; &c.

*Statesman and Friend of India, Sanitary Journal, House and Home, Science, Le Concours Médical, Cambrian News, La Crónica Médica, Staffordshire Daily Sentinel, Weekly Gazette, West Middlesex Advertiser, Poole Sun, Anales del Circulo Medico Argentino, Barbados Herald, Allgemeine Wiener Medizinische Zeitung, Glasgow Herald*, &c., have been received.

# Medical Diary for the ensuing Week.

## Monday, Nov. 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. W. Spencer Watson, "On a Case of Recurrent Epistaxis successfully treated by the Injection of Perchloride of Iron." — Dr. R. J. Lee, "On the Diagnosis and Treatment of Whooping-cough."—Dr. Robert Boyd, "On the Lunacy Acts and Medical Relief."

## Tuesday, Nov. 16.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. Discussion on "Rickets," to be opened by Dr. Hilton Fagge; Dr. Crisp, Dr. Barlow, Dr. Lees, Mr. Warrington Haward, Dr. Norman Moore, Mr. Shattock, and others are expected to take part in the discussion.—Mr. Pearce Gould will show a Child with Congenital Malformation of Leg and Foot.

## Wednesday, Nov. 17.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY. — 7½ P.M. Council.—8½ P.M. Mr. Augustus Winterbottom: "Cases of Neuralgia dependent upon Non-irrupted Teeth."

SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.—8 P.M. Opening Meeting of the Session.—Address by Mr. F. J. Bramwell, Chairman of the Council.

## Thursday, Nov. 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

HARVEIAN SOCIETY.—8½ P.M. Mr. Henry Power: "Cases of Injury to the Eye, with Remarks on the appropriate Treatment."—Dr. Ferrier, "On a Case of Cerebellar Tumour, with Remarks."

## Friday, Nov. 19.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

## Saturday, Nov. 20.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.


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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.